



# November Newsletter

Newsletter Date

Volume 1, Number 1

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Meeting at Fairview Center  
3621 Campbell Ave.  
Lynchburg, VA 24501  
Wed, November 21  
7:00 pm until 9:00 pm

## Note from the president:

Hi All,

I hope you are staying warm as we head into November. I have been away for a couple of months and have returned hoping to be home for a while. We have received some suggestions from members and have discussed these and other options. I just wanted to thank those that felt driven to write us on the state of the club. That was enough for the board to take a step back (mostly me) and see what we could do to keep the club going. We will be bring these options up at the regular club meeting and get your take on what we have come up with.

We have the last event of the year, the Salem Show, coming up after Thanksgiving (Friday, 11/23) and we need your help. We will have signup sheets at the meeting so please let us know when and if you can help. We will have more information at the meeting also.

Keep looking down

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## Program for this Month



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November 21<sup>st</sup> we have our end of year auction. We have picked some specimens and slabs to auction off at the meeting. This is open to members and guest, so bring a friend or two that likes rocks and let's have a good time. We should have sheets and paddles for everyone. This will be a cash or check as we do not have the ability yet to take credit cards.

This will be a very informal auction so we do not have anyone that can speak as fast as an auctioneer but we will get the job done.

**For December the program will be our Christmas dinner and dirty Santa swap (Dec 19). We are asking those that come to bring a covered dish (vegetable or dessert) and the club will supply the meat.**

**Plan is not to have a meeting in January or February so the first meeting of the New Year will be in March. As of today the tentative speaker for that meeting will be Dave Young owner of Stones and Bones on Rt. 221.**

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**Members At Large -**  
**Natalie Darling &**  
**Eric Routon**

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## Nomination for Club Officers



We will try to reduce the number of officers that it takes to run the club. This will still be open for discussion at the regular club meeting. Nomination will be taken from the floor at the November meeting and we will vote at the December meeting.

President: Open

First Vice President: Open

Second Vice President: Open

Treasurer: Linda Noble

Secretary: Linda Noble

Membership Chairman: Thom Noble

Editor: Steve Gordon

Member At Large: Eric Routon

Member At Large : Dave Woolley

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## Field Trip Opportunity



### Dixie Mineral Council Field Trips

The Southeast Federation of Mineralogical Societies, Inc



The Friendly Federation - Founded in 1976 to serve  
DMC Program of the SFMS Field Trip Committee  
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**An Official Field Trip of the Jacksonville Gem and Mineral Society (Jacksonville, FL)(HOST)**  
**Saturday, December 15, 2018**  
**9:00 AM Eastern Standard Time**  
**Fernandina Beach**  
**Fernandina Beach, Florida**

**TRIP:** Amelia Island sharks' teeth are sourced from the dredging of nearby channels to the north and west (and reportedly date back to a 20-million-year-old geological deposit). The island receives sand from this dredging which is pumped back onto the beach in re-nourishment efforts that take place every several years. The last beach re-nourishment was completed in March 2018.

# You Too Can Become a Part of the Story of Faceting Part #1

## A History of Gem Cutting

by Dave Woolley

I have divided this presentation into four parts:

1. Hand Faceting.
2. Jam Peg Faceting and Mechanical Improvements.
3. Electronic Faceting.
4. Build It Yourself Faceting Machines

Rocks and minerals have fascinated people for as long as there have been people; colors attract attention, crystals have unique shapes and sparkle. At first, someone might have found an unusual rock and picked it up to show others. The Australians Aboriginals were probably the first to pick up rocks with flashes of brilliant color: Opal. What to do what when you don't have pockets? Tie a string around it and hang it on your neck or wrist or fabricate a ring to keep it handy. Gems were eventually ground down from larger pieces by rubbing them against other rocks. Polishing was discovered as abrasives particles too wore smaller. Shapes evolved making owning and wearing a gem practical and interesting.

Politics, religion, and status have influenced how we adorn ourselves, not to mention sex appeal. A gem can be a sign of *political authority* found in a scepter and crown, or a unique ring with sealing wax to mark documents; *religious authority*, a ring to be kissed; and for those who could afford the rare, exotic, and expensive, *status*, plus a way to hide and transport wealth. I suspect that you are reading this for some of the same reasons. Fortunately, beautiful gems no longer have to be expensive. You can even collect your own stones, make your own cutting equipment, cut your own gems, and place them into your own handmade jewelry. The goals of this to presentation are to familiarize you with the process of gem cutting, to explore the *development* of faceting equipment, and to get you involved.

Photographs:

Many photographs and illustrations were found on the internet including the first several taken from the highly recommended "Faceting History: Cutting Diamonds and Colored Stones" by Glenn Klein. Photographs with my hand included were taken from Ken Michalek's "United States Faceters Guild East Coast Collection of Historic Faceting Machines". Several photos were made with the permission of the dealers representing those faceting machines at a recent Franklin Faceters Frolic held in Franklin, North Carolina.

Two concepts are critical to successful faceting: **Angle** and **Index**.

Two activities are important for enjoyment and making money: **Precision** and **Speed**.

## Hand Faceting



1. This stone is **Hand Held**. A gem can be cut with a curve by rocking the stone against the Lap, or with a *flat surface*, a **Facet**, by holding the stone steady. Note the two **Flat Laps** and jars of finger applied wet **Abrasives** used to **Grind** and **Polish**. The abrasives tend to imbed the Lap's surface. This grinding **Lap-and-Spindle Shaft** is replaced with the other for the Polishing. **Coarse-Grinding** removes crud and yields a pleasing shape. **Fine-Grinding** or Pre-Polishing eliminates deep scratches from the Coarse-Grinding in preparation for Polishing. **Polishing** makes windows to expose the gem's interior. Tiny gems do not require the Coarse-Grinding. **Mirror Facets** are cut on the back side of a transparent gem to reflect the light back through the top of the stone, increasing the sparkle. For certain transparent minerals as light enters a Facet, some of the light will **Refract** or separate into rainbow colors. Later, exiting through the top, some of the light may further refract increasing the separation of the rainbow colors. Gems with color mask the other refracted colors.  
Note: All of the Facets are "eye balled in", located and cut by eye-judgements and hand-movements.

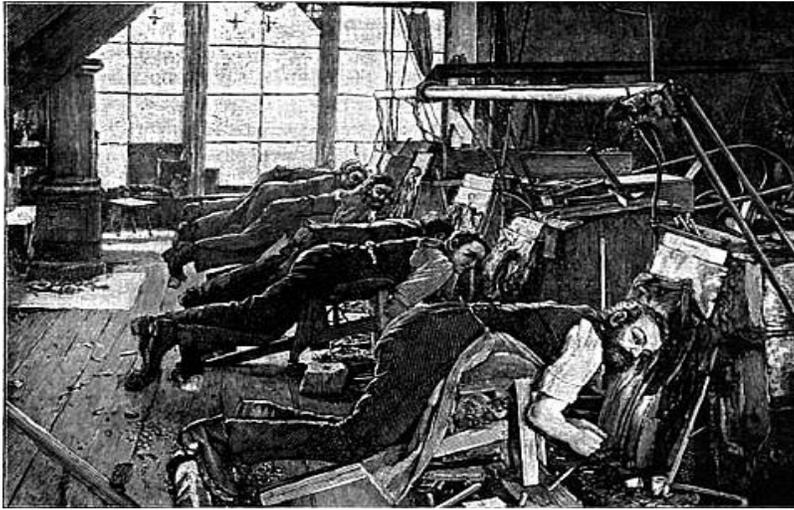


2. Another **Hand Powered**, Hand Faceting example. Move the bow one way for rotation; slack and return the bow to the starting position. The heavy Spindle acts as a flywheel maintaining the spinning momentum.

If these Faceters had glued sticks to their gems, they would have handles to hold their stones for better **Control** of the cutting, plus they would have saved their finger nails.

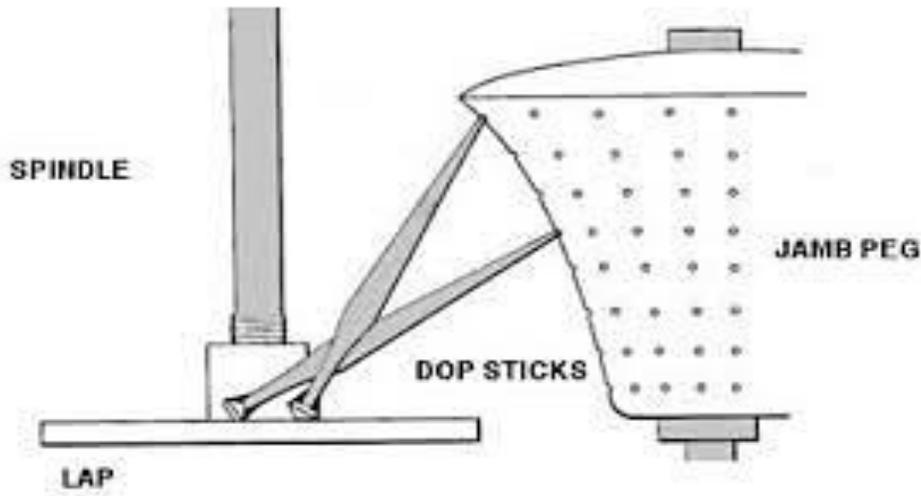
Historically, the most important improvement to gem cutting is temporarily gluing the stone to a stick. A Faceter can now Control the **Angle** of the cut, and the **Rotational Position** of the gem. The Angle the stick makes to the Lap allows for a low or a steep Facet angle. Rotation the stick to a new location **Indexes** or locates a new spot for the next Facet to be placed around the gem.

The next illustration demonstrates a diversion for cutting opaque or non-transparent gems.



3. **Cabochon** and curve-shaped gems were cut on the *perimeter* of these early water-powered **Grinding Wheels** rather than on the flat side of a Lap. Wheels were chiseled from Quartz Sandstone. It took a lot of pressure to cut a piece of Agate of the same hardness as the Quartz. Later, Emery, a Corundum/Hematite Rock, replaced the Sandstone. Corundum has a superior hardness requiring less body-pressure to cut. It too was replaced with Carborundum, a synthetic abrasive. Modern Diamond abrasive wheels, much smaller, are now powered by electric motors, plus they cut with slight hand-pressure.

### Jam Peg Faceting



4. This is a side-view sketch of a **Jam Peg** faceting machine – a **Removable Hand Piece Machine**. The gem is glued to a wooden **Dop Stick** with old fashion Letter Sealing Wax called **Dop Wax**. Note the two Dop Sticks demonstrating two of the possible cutting **Angles**; different holes in the Jamb Peg change the Angle. Rotating the Dop Stick **Indexes** or locates the facets *around* the perimeter of a gem. Rotating the Jam Peg and locking it on its threaded **Mast** to a new position is the **Fine Height Control** to make subtle changes in the Angle. A new line of vertical holes faces the Lap after a Fine Height adjustment. The curve of this Jamb Peg keeps the gem in the “work area” of the lap when cutting at different angles. Facets are *cut by eye* as in the earliest hand faceting, but the Control is greatly improved.