Sparkling Snowflake Pendant

By Alisa Gannon

I have wanted to make a snowflake pendant for some time but couldn't figure out how to easily execute it. Those little cutouts could be quite daunting. I finally thought of using drill holes as a work-around. I thought a small gemstone in the middle would be lovely and using a pre-made tube setting makes things less complicated. Use my template or try designing your own if you wish!

Materials List

- 18g sterling silver sheet
- 4mm sterling silver tube setting (available at Rio Grande)
- 4mm faceted gemstone of choice-make sure it is listed as calibrated or as 4.0 mm so it will fit the setting- I used a Swiss blue topaz
- 2 inches of 16g sterling silver round wire dead soft
- 4 inches of 22g sterling silver round wire dead soft

Tool List – Don't forget Safety Glasses!

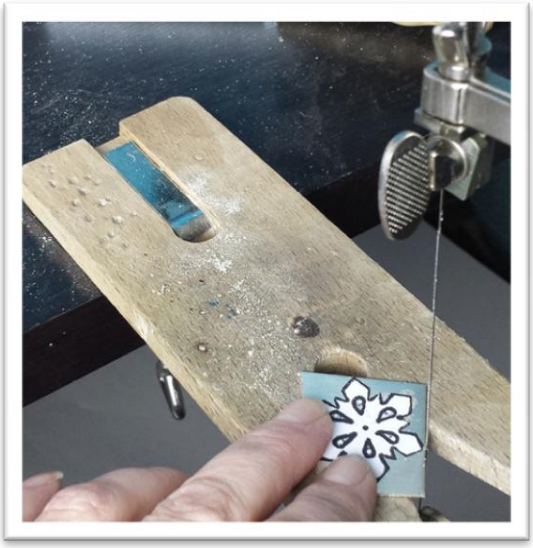
- Jeweler's saw and size 4/0 blades
- Rubber cement
- Soldering setup
- Center punch and hammer
- Scribe and straight edge
- Drilling device such as flex shaft or Dremel
- Drill bits in sizes 1mm, (#56) 1/16(#51) ", and 5/64" (#46)
- Lubricant such as Bur-Life
- Needle files
- Very fine sandpaper 600+ grit or finishing film, such as 15 or 9 micron
- Safety glasses
- Polishing system of your choice (I prefer 3m bristle discs , using the pale green or peach colored for a final polishing.)
- Square-tipped bezel pusher
- Burnishing bezel pusher
- Chasing hammer
- WUBBERS Classic Round Nose Pliers
- WUBBERS Chain Nose Pliers

Step one

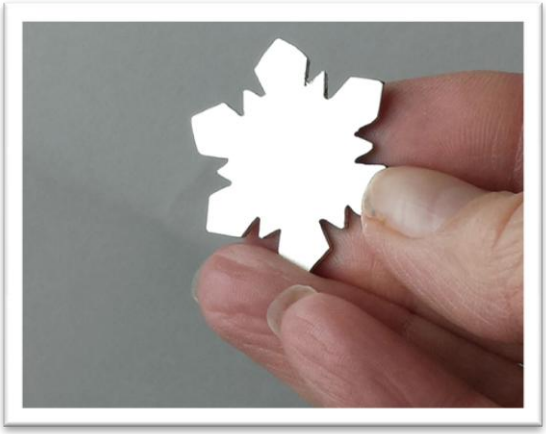
Cut out the template very carefully. Use rubber cement to attach the pattern to the silver sheet. Coat both the backside of the paper and the front side of the silver, let the cement dry, then attach. Let it set about 5 minutes.

Carefully and slowly saw out your piece. The reason I recommend the 4/0 blades is it may take longer, but for precise work, you will get much better handling and less filing is needed.

When you need to turn a sharp corner, start sawing in place and turn your metal until you are in line again.



This is how my piece looked after sawing-no filing yet. And I am no expert at sawing!



Step Two

Use the needle files, then sandpaper to refine the edges of the piece.

Step Three

Use a center punch and hammer to mark all of the black dots on the template. You may now remove the template paper.

Step Four

Drill all of the holes except for the marks at the tip of the teardrop starting with the 1mm bit. Then use the 1/16 " bit on only the center hole and the holes in the wide end of the teardrop. Use the 5/64 (#46) bit only on the teardrop holes. Lubricate your bits with BurLife or bees wax before drilling.

TIP*:* It is important to start with a small (pilot) hole first, then gradually use larger bits. Otherwise, the bit may grab the metal and possibly turn your snowflake into a throwing star. Even while doing it gradually, make sure you have a very secure grip on the piece (or clamp it) when using the largest bit.

Step Five

Using a scribe and straight edge, draw a line from the undrilled mark to the side of the large hole-making the teardrop shape.

Step Six

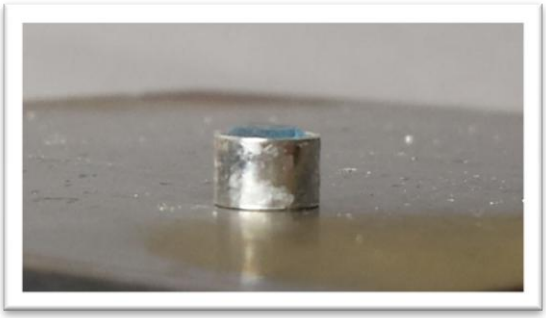
Thread a lubricated saw blade through the large teardrop hole, then saw following the line to the mark.

Back the saw out of the hole and repeat on the other side. Repeat for each teardrop. Then, using a round needle file and sandpaper. refine the edges. Use sandpaper on the surfaces to smooth them.

This is how the cut-out shape should look. Do as much clean up, such as getting rid of any scratches, now. It will be harder to do after the stone is set. Try sanding in one direction, and keep a smooth even finish with

Step Seven

You will need to make sure that the stone fits the setting. *It will be best if you have several stones from which to choose, because if you purchase a bag of 4mm stones, they may run from 3.8-4.2, and may not always fit the tube set.* You will notice that one side has a seat cut into it –this is the top of the setting. Place the stone in and a good way to snap it in is to use the blunt end of a chopstick. You want the table (see diagram) of the stone to be slightly above the edge of the tube setting as depicted in the photo. Carefully push the stone out with the pointed end of the chopstick.



Step Eight

Lightly sand the surface of the snowflake and the bottom of the setting. Then apply white paste flux to the snowflake and set it on your fire brick. Flux all areas and edges of the setting and center it over the drilled hole on the snowflake.

Place 2 small pieces of hard solder inside the setting making sure it touches the wall and the floor. Concentrate your flame on the snowflake to avoid melting the setting. When the flux turns clear, move the flame to the seam and be sure the solder flows all the way around. Quench and pickle.

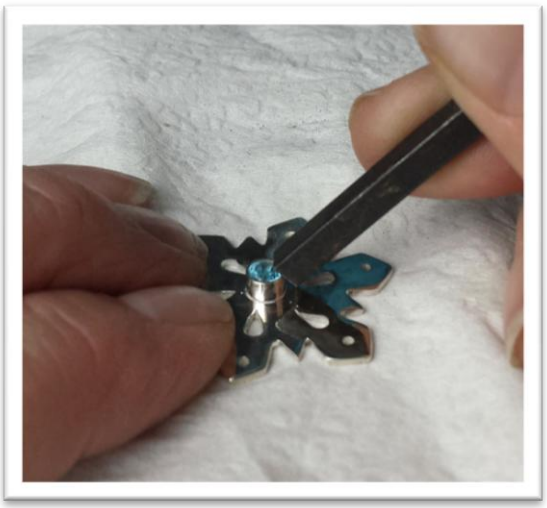
Step Nine

I recommend doing most of your polishing before setting the stone, then just cleaning up any scratches and doing a final polishing at the end. Wash the snowflake with Dawn and a brass brush. It's also a good idea to gently clean the stone with a soft toothbrush or even a Q-tip and Dawn. Make sure everything is dry before proceeding.

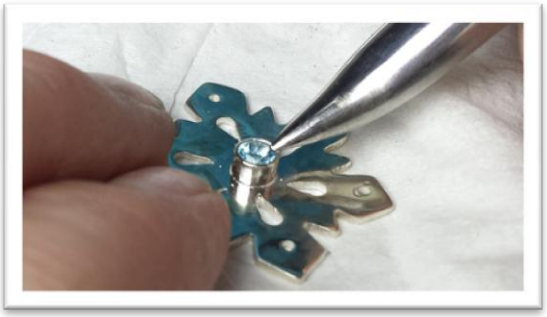
Step Ten

Now we will set the stone. Place it in the setting and lock it in with the blunt end of a chopstick. Place the square bezel pusher so the middle is against the wall. Push in with a rocking motion to lock in the girdle. Take care to not scratch the stone or the snowflake. Repeat on the opposite side of the stone. Repeat until you have gone all the way around.

Place the bezel pusher so you can push the bezel onto the face of the girdle, using a rocking motion. Continue all of the way around the stone.



Lastly use your burnisher to press the very edge down and create a shine.



Here is a close up of how the bezel should appear.

Step Eleven

Now we will make a bail. Flush cut 2 inches of the 16g wire and use your chasing hammer to flatten both ends. File and slightly round the edges.

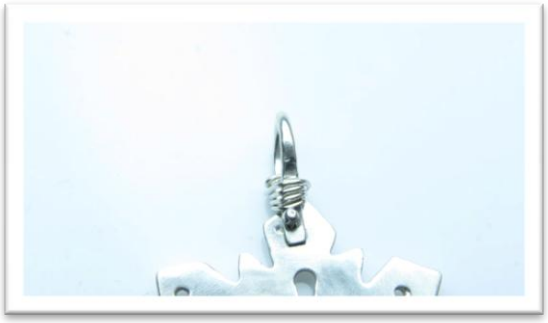
Step Twelve

Carefully drill a hole in each end of the wire with a bit between 0.7 and 1mm. Bend the wire in half using the thick end of the Wubbers round nose pliers. Then squeeze the ends together.

Step Thirteen

Use a torch to ball up one end of the 4 inches of 22g wire. Quench and pickle. Line up the bail holes with one of the holes in the outer edge of the snowflake. Thread the 22 gauge wire through and wrap around the bail a few times. Finish by wrapping just around the back wire, cut, and tuck in the end.

The finished bail.



Step Fourteen

Give your piece a final polish to remove any scratches caused by setting the stone and polish the bail. Clean the silver parts with Dawn and a brass brush and dry with a soft cloth. Attach to a chain of your choice and enjoy!

Review Questions

1) Piercing (cutting out shapes in a piece) should not be attempted by beginners.
    a) True
    b) False

2) You should saw quickly using a blade with the biggest teeth possible
    a) True
    b) False

3) The flat top of the stone is called the:
    a) Surface
    b) Table
    c) Girdle

4) The tool used to press down the bezel is called:
    a) Center punch
    b) Bezel press
    c) Bezel pusher

5) Pilot holes are necessary when drilling larger holes in metal
    a) True
    b) False