

Amplified brilliance

*Wrap a picture-perfect citrine
in a 14k gold-filled wire frame.*

by Anna Lemons

Fine wire wraps embracing a gemstone give this pendant a softness unachievable through other artistic means. Just as water eagerly flows into nooks and crevices in its path, wire can be molded into challenging shapes that other jewelry-making media cannot. Wire's flexibility allows it to caress curves, tuck into minute cracks, and morph into myriad forms.

In this project, you will wrap a tantalizing 14k gold-filled wire bezel around a sparkling brilliant-cut citrine. While you may begin at your workbench with just a few straight lengths of plain wire, you will end up with a piece of pure baroque elegance. This pendant is best suited for artists who are skilled in wireworking.



color of wire

Gold wire was chosen for this project to set off the warm tones of the citrine. If you select another gem that has cool tones, such as amethyst or aquamarine, silver wire may be a better choice.

Matching the tone of the wire to the gemstone you are using enhances the clean and elegant appearance of your finished piece. Garnets, rubies, gold topazes, and other "warm" gems will look their best in gold settings, particularly if a traditional effect is desired.

However, don't overlook the opportunity to set a gemstone in a nontraditional fashion with an unexpected choice in metal. You may end up with something spectacular!



materials

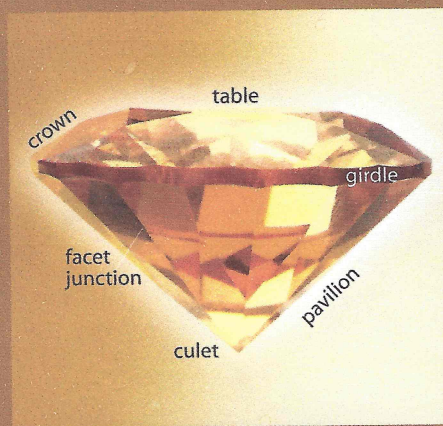
- 14k gold-filled wire:
 - 30 inches (76.2cm), square, 22-gauge, half-hard
 - 32 inches (81.3cm), half-round, 22-gauge, half-hard
- 14mm round faceted gem

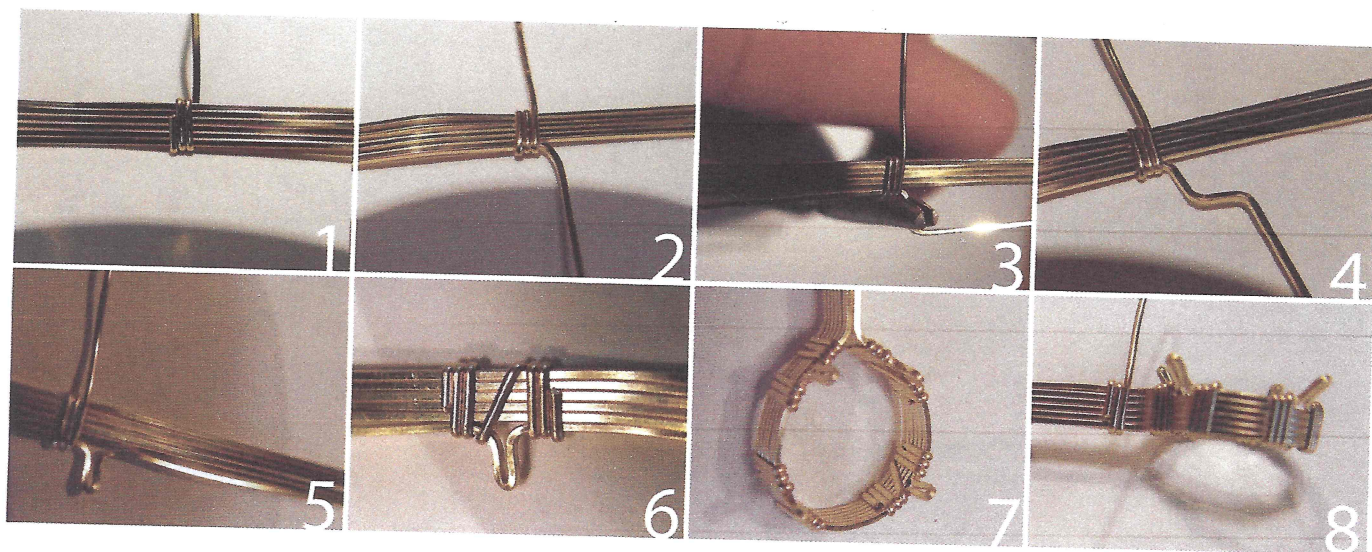
tools and supplies

- water-soluble marker or pen
- fabric tape measure
- wire cutters
- polishing cloth
- chainnose pliers
- flatnose pliers
- roundnose pliers
- ring mandrel, marker, round dowel, or other small round object
- metal file

anatomy of a gemstone

This citrine is brilliant-cut, but many of the terms noted below are universally applicable to other lapidary cuts as well. Add these words to your jewelry-making vocabulary, and you'll impress your friends and family with your knowledge of a faceted gemstone's many faces.





Measure and prepare the wire.

Calculate the length of your wire bundle by measuring your gem's circumference and adding 3 inches (7.6cm) for the bail. In the pendant shown, a 2-inch (5.1cm) circumference plus 3 inches (7.6cm) for the bail equals a total of 5 inches (12.7cm). Now determine the number of wires (placed on top of each other) needed to correspond to the depth of the gem's pavilion – the distance from its girdle to its culet (see "Anatomy of a Gemstone," p. 65). For the 14mm citrine shown, six 5-inch (12.7cm) pieces of square wire were laid beside each other to match the depth of the gem.

After cutting the appropriate number of wires, clean and straighten them by rubbing them with a polishing cloth several times.

Mark prong locations on the gem. Using the gem's circumference measurement, incrementally mark prong placements with a water-soluble marker or pen. In the pendant shown, prongs are placed at 1, 4, 8, and 11 o'clock positions around the gem. You can place the prongs at other positions, provided they are evenly spaced.

Wrap the first prong binding. Lay your wires side by side so they are flush with each other. Starting from the exact center, begin a three-wrap bind using a 5-inch (12.7cm) piece of half-round wire, round-side up. Finish three wraps, but do not cut the tail of the wire [1]; the tail will come into play as you finish the prong.

Shape the prong. Hold the wire bundle horizontally, with the wire tail from the binding extending upward. Use your fingers to grab the bottommost wire in the bundle, on the right side of the binding, and bend it down at a 90-degree angle [2]. On this wire, measure $1\frac{5}{64}$ inch (6mm) away from the bundle, grasp this location with flatnose pliers, and bend the wire upward at a 90-degree angle [3]. Measure $1\frac{5}{64}$ inch from this second bend and create a third 90-degree angle bend downward. The wire should now resemble a zigzag pattern [4].

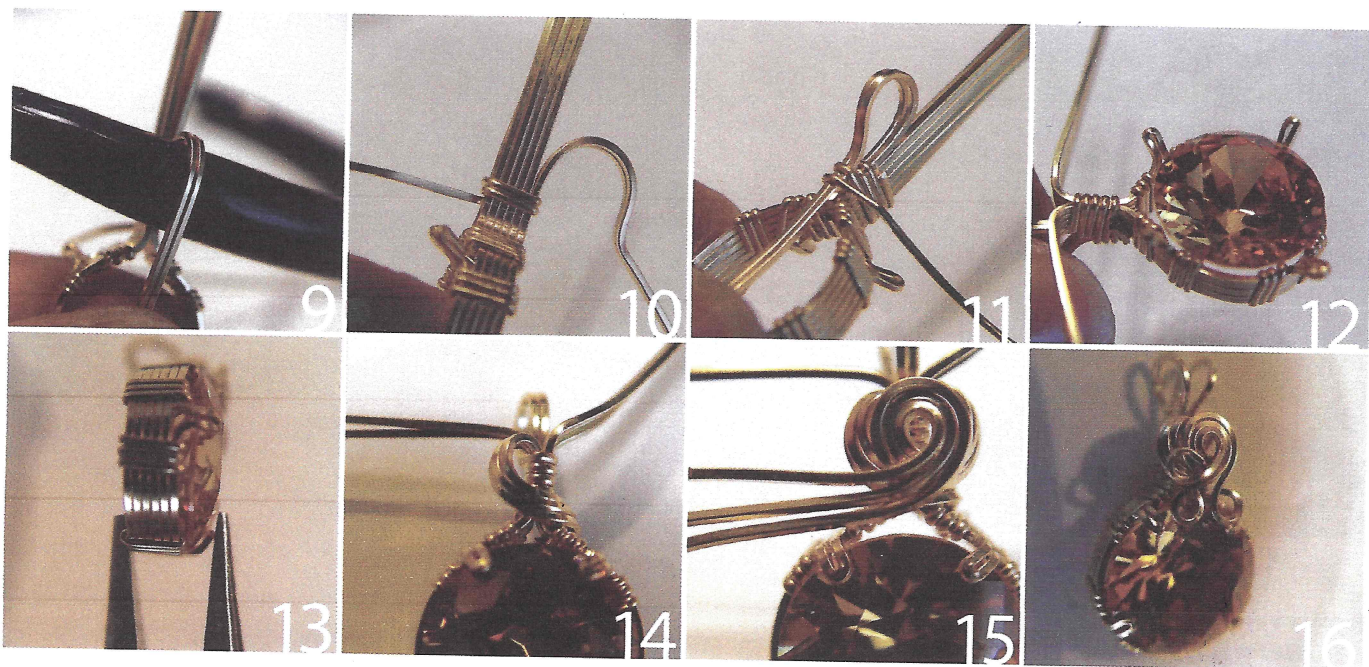
Finish the prong. Use flatnose pliers or your fingers to pinch the zigzag shape together and align the rest of the wire so it is parallel with the wires in the bundle [5]. Keep the prong wire flush against the bundle. Use the tail (the wire that is

extending upward) to cross over the back of the bundle and create a three-wrap binding on the other side of the prong [6]. Cut the wire ends and press them both against the inside of the bundle using flatnose pliers.

Continue to make three other prong units exactly like this one; evenly space them along the length of the wire bundle. You may need to create more of these units or allow more space between them, depending on the size and shape of your gemstone.

Form a circular bezel. Use a ring mandrel, marker, or round dowel to form the wire bundle into a circle with the cut ends facing the interior. The size of the bezel should be slightly smaller than the circumference of the gem to hold it securely.

At the closure of the circle, use flatnose pliers to grasp one side of the wire bundle. Bend this side straight up at a 45-degree angle. Repeat with the other side of the wire bundle [7]. Make sure the prongs are evenly spaced and that your bail will be centered. Also, check to see that your gem will sit in this bezel without falling through. Adjust accordingly. Starting at the top and working down, bind the top wire bundles



together two to three times using a 6-inch (15.2cm) piece of half-round wire [8]. Do not cut the end of this binding wire.

Shape the bail. Hold the bezel with the back facing you. Using the large diameter of a roundnose pliers or the handle of the pliers, form one rounded bend in the two back wires that are facing you [9]. Make sure this bail will accommodate your chain. At the base of this curvature, bend the two wires away from the pendant at a 45-degree angle [10]. Pinch the base (the 45-degree angle) of these two wires against the back wires of the pendant. Bind them all together with a three-wrap binding using the tail of half-round wire you used to bind the bezel together [11].

Trim the tail of the binding wire and press it down against the side of the binding wraps using flatnose pliers. Also trim the tails of the bail wires and press them down tightly against the binding wraps. This step will anchor the wires securely, ensuring the bail doesn't come apart with wear and tear. Bend the

remaining bundle wires out to either side at 90-degree angles – half to one side, half to the other as shown in photo 12.

Set the gem. Bend your prongs outward slightly and set your gem in place [12]. Hold the gem evenly and firmly inside the bezel. Use your roundnose pliers to roll each prong up and over the gem. Don't try for an extremely tight fit just yet. Once all prongs are positioned over the gem, use chainnose pliers to press them down against the gem [13]. Slowly apply even pressure to all four sides until the prongs are secured around the gem; the gem shouldn't rock in the bezel.

Add the finishing touches. The remaining wires at the top are used as decoration. In the pendant shown, three wires from the left were brought across the front to the right, trimmed, and tucked beneath the bezel [14]. The wires from the right were formed into a loop in the center of the pendant [15], and three tendrils were curled

with roundnose pliers and left hanging down [16].

This step is best done free-form, so visualize a design that is appealing to you and have fun putting the finishing touches on your pendant. Separate the two wires of the bail into an attractive V shape. File any wire ends that could irritate the wearer and smooth any nicks made by your pliers during construction. Then slide the pendant on a chain and enjoy!