

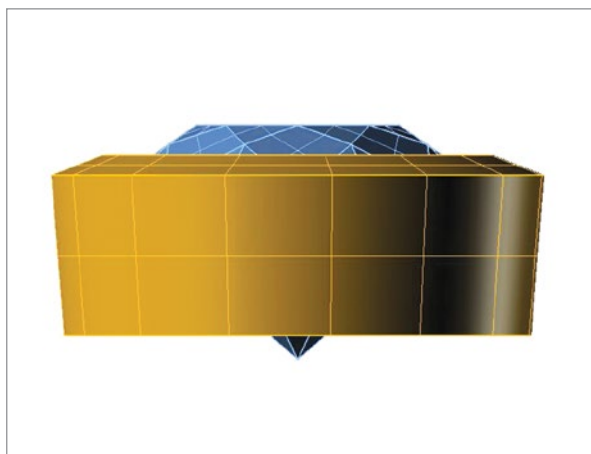
TEXT AND PHOTOS BY JOEL MCFADDEN

BEZEL BASICS

Tips to overcoming bezel setting obstacles

BEZEL SETTING IS OFTEN THE FIRST SETTING STYLE new jewelers try to tackle. While it seems simple, there are several ways in which things can go wrong, such as stones being set crooked, getting damaged, or falling out. Often these problems are caused by cutting a poor seat with the

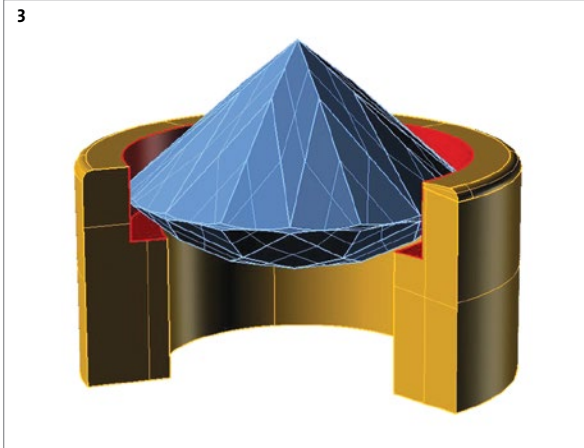
wrong burs and then trying to fix the problem by overworking the bezel wall. Below is an overview of the steps and tools involved in bezel setting and how jewelers can overcome such problems.



1. The first step is to make sure the bezel is the right size and depth for the stone. If you're setting a faceted stone, make sure that the bezel is at least as deep as the total depth of the stone, since you don't want the stone's culet sticking out the bottom of the bezel.

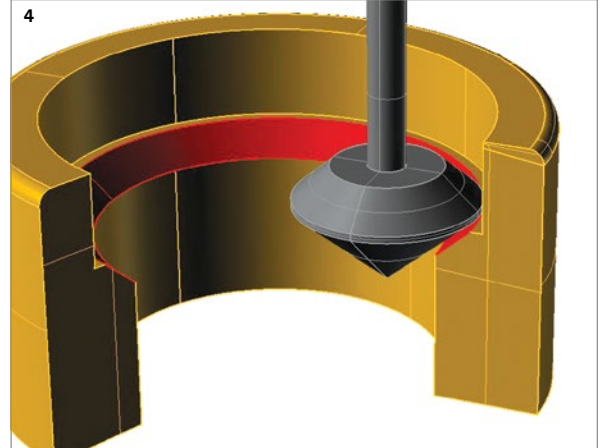


2. To set the depth of the stone, use an inverted cone bur to start cutting the seat. Inverted cone burs are designed to cut on the end, so they're perfect for this task. You can also use a small tool called a setter's helper (above). It slides over the inverted cone bur and is locked with a set screw. This tool makes it a little easier to get your seat flat and even; the bottom of the tool will ride along the top of the bezel while the bur cuts evenly below.



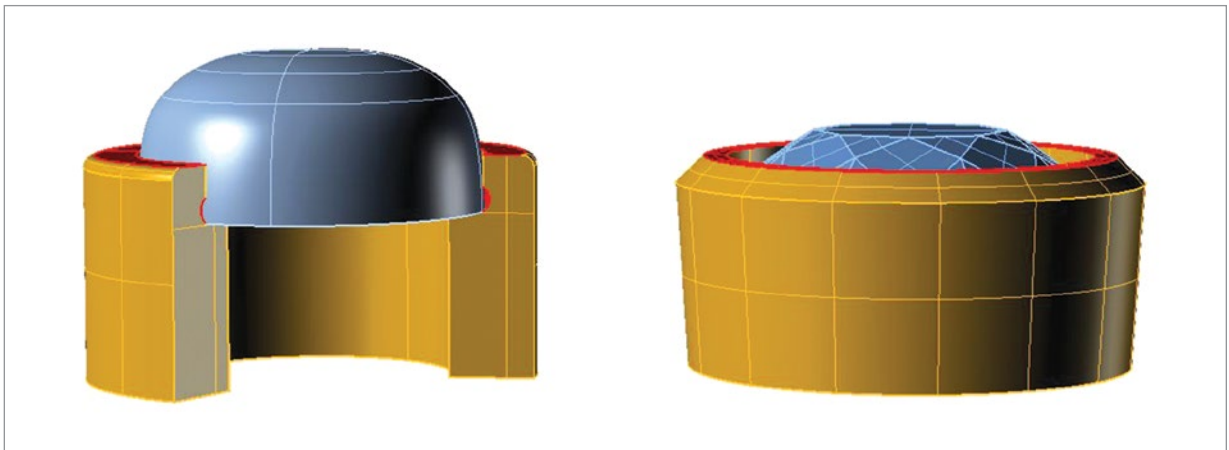
3. The next step is to cut the sidewall of the bezel to accommodate the stone. Ideally you want to cut the wall until your stone is able to drop in. The tighter the fit, the better, but make sure the stone drops all the way to the seat. Your goal is to make sure you have an even wall of metal around the stone and that your stone is at the correct height.

If you're setting a faceted stone, you can check this by dropping the stone in upside down. This checks that the pavilion facets won't make the stone sit up, and it will show if the circumference is cut properly. The stone should drop



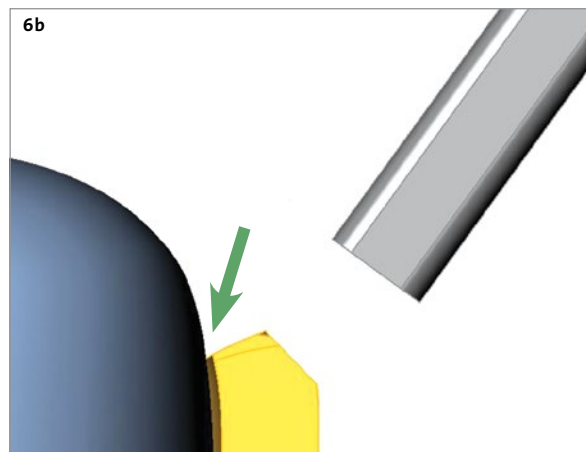
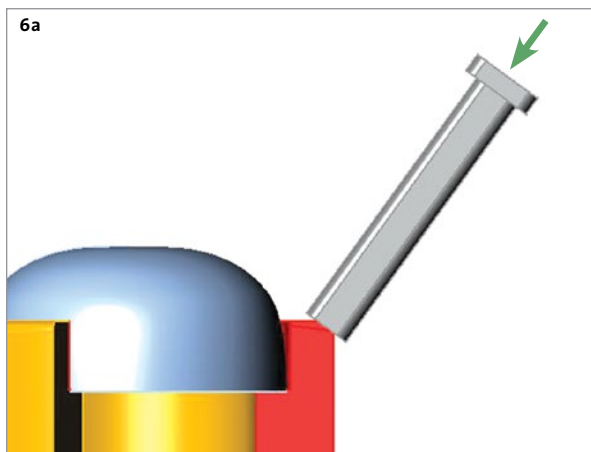
in and fall out with little effort, but it shouldn't wiggle around in the seat.

4. If you're setting a faceted stone, you'll need to use a setting bur to cut a relief for the stone's pavilion. (Cabochons have flat bottoms that will sit right on the seat with no alterations needed.) I do this with a small hart bur. Simply cut back on the deck until your stone drops in to the right height and doesn't rock.



5. Make sure that the top of your bezel wall is flat and even. File and polish it as needed. This is also the time to check the height of the wall. The biggest mistake I see jewelers make is to leave too tall a wall above the stone. You want

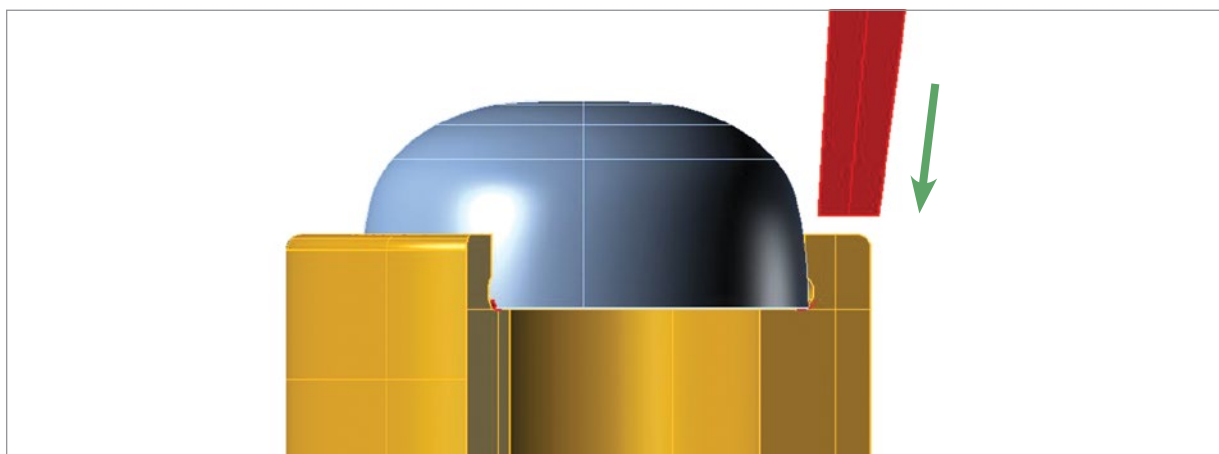
just enough metal to secure the stone. Remember that the top of the bezel will become the bright cut or edge that shows around the stone. I like to use a split lap to get a mirror finish.



6. Once your seat has been properly cut, you are ready to set the stone. If there's still too much metal along the setting wall, you can file it off. Make sure the bezel is securely held in a way that does not allow for bouncing or give. For bezels on rings, I like to use a mandrel or BenchMate. For other bezels, I'll use Jett Sett or solder a piece of scrap to the bottom of the bezel to give me something to secure.

To set the stone, I use a 2 inch masonry nail with a flat polished end as my punch and a chasing hammer to tap it.

The polished end of the nail will impart a nice finish on the bezel lip that will require less cleanup later. With the nail, tap the outside edge at a 45 degree angle down and in (6a), moving the punch along the wall as it closes (6b). Tap just hard enough to move the metal slightly with each hit. I like to tap at opposite sides of the bezel, rotating it 180 degrees every few hits to keep the bezel wall collapsing evenly. Continue to do this until the stone is secure.

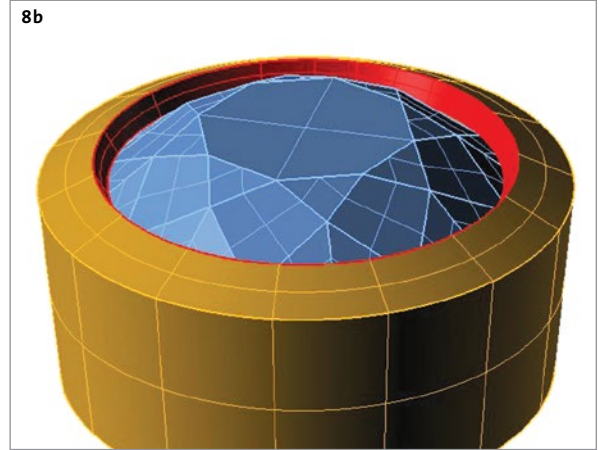


7. You can also use the nail tool to flatten out the ragged metal edge around the stone. Tap the nail straight down

until the edge rolls onto the crown facets.



8. Now it's time to apply a bright finish to the bezel edge. Some jewelers like to use a graver to do this, but I think the chances of scratching the stone with the graver are too high. Instead, I use a stainless steel fork tine (8a) as a burnisher to clean up the wall. Normal steel burnishers can scratch almost any stone. Stainless steel is much softer and will not



scratch most stones. To make such a burnisher, clip off a tine from a stainless steel fork. Shape one side flat, then create a point that will fit the bezel. Polish it very bright and then run the tine with the flat side against the stone while compressing the inner lip. This should tighten any loose spots and leave a nice, finished bright cut (8b).