Have a Heart: One Bassoonist's Method for Finishing Reed Tips

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In the finishing process for a reed, there is often no particular method or mechanism for creating the shaping at the tip sometimes known as a "thumbnail" shape. That shape is shown in Figure 1, and varies from a rounded shape to a pointed one, based on reed style. The following method is one that I developed while teaching reed classes at the University of Colorado at Boulder and the Cincinnati Conservatory Preparatory Department. It is doubtless influenced by those teachers with whom I have studied reedmaking – **William Winstead, Yoshiyuki Ishikawa, Per Hannevold, Kim Walker,** and others – and the books and articles I've read on the subject – **Skinner, Weait, Eubanks,** and **Garfield,** to name a few. To the best of my knowledge, this method does not duplicate any previous work on the subject.

The following method is useful for both parallel and wedge-type reeds (see figure 1), though of course the final measurements will need to be altered based on your reed style. Required tools are: light source, pencil, sharp knife (curved blade is helpful), plaque, flat file (like the Revlon permanent nail file), holding mandrel (if desired), and of course a beautiful, well-formed blank. I usually perform all of the following steps dry, and then fine-tune as necessary after the reed has been soaked.

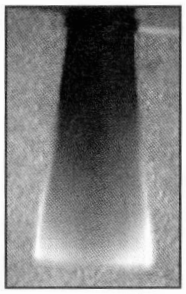

Figure 1

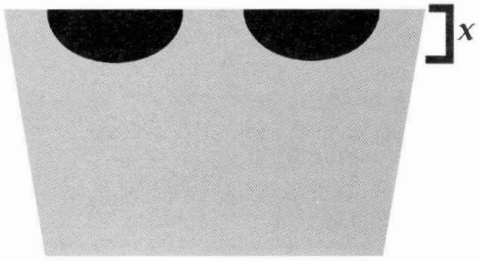

Figure 2

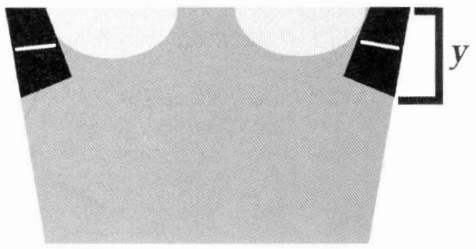

Figure 3

1. THE "W"

Create a "W" shape at the tip by scraping in the black areas of Figure 2. These should be semicircles and should not overlap the rails or the middle of the blade. The distance x is variable, based on the desired thumbnail shape and positioning: a sharply angled heart will require a larger distance x. It is very helpful to draw on the reed blade with a pencil, darkening the area you want to scrape. After the pencil marks are gone, repeat drawing / scraping until the desired thinness is reached, or until light shining through the reed clearly shows the semicircular regions. Make sure to look at the scrapings to ensure that they are only coming from the desired location – this is where using the curved part of a blade is very useful. At this point, do not worry about smoothing out the transitions – that will come at a later step.

2. THE RAILS

Scrape the areas indicated in black in Figure 3. The area closer to the tip should be scraped more than the area closer to the back, depending on your initial profile. In order to achieve this, first scrape on the tip side of the white line some number of times. Then, scrape the same number of times over the entire black area. Repeat until the desired thickness has been reached. The distance y is variable based on the distance x and desired tonal characteristics of the reed. It is best to make y only slightly greater than x at first, and refine this distance during play-testing.

3. MIDDLE TIP

If Step 1 is followed exactly, there will be an area at the middle of the tip that is still the thickness of the original profile. In order to thin this area, work with the knife in the black area of Figure 4. The knife position

should alternate between nearly parallel with the spine and parallel with the tip. If the knife is not very sharp, it will tear the blade at this point. This step will create a shelf at the tip of the reed. Don't worry about this – the transition will be smoothed in the next step.

4. BLENDING

There are two areas of the reed at this point that have shelves, or sharp transitions between thicker and thinner areas on the reed. These shelves can be seen in the light as lines between dark and light areas of the reed; they can also be seen by looking at the reed's profile. A side view looks like Figure 5 (for a parallel-scrape reed). Shelves are indicated with arrows. Some reedmakers prefer to leave these shelves in place for their dampening effect. If you do not want to blend these regions, please skip to Step 5.

The areas for which the transitions need to be blended are those that were shaved in steps one and three. I learned the method in step a. from **Stephen Maxym.**

a. For the region indicated in black in Figure 6 (sometimes known as the "B" and "C" regions of the reed), the "bump" or "shelf" can be scraped off with the flat part of a knife. The knife should be placed at approximately a fifteen degree angle with the spine along the yaw axis (this is the axis that is parallel with the reed blade – see Figure 7). Along the axis that is perpendicular to the reed surface, or the pitch axis, the knife should be placed at the angle that is desired for the finished reed. This angle will cause the knife to come into contact with the shelf in the black area of Figure 6 before it contacts the tip or the channel of the blade (see Figure 8). For this step, it is important to look for where the shavings are being produced. When the shavings are produced evenly from behind the black area of Figure 6 to the tip, all bumps were removed successfully.
b. It is difficult to remove the shelf from the middle of the reed using the method found in the previous step. In order to remove the shelf created by Step 3, shown in the black area of Figure 9, use a flat file placed at the same angle as the knife blade in

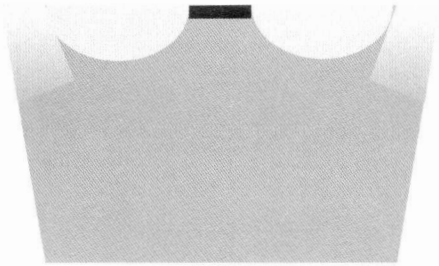

Figure 4

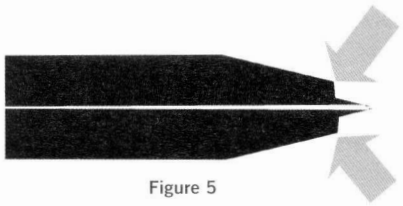

Figure 5

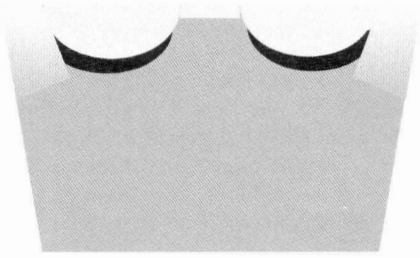

Figure 6

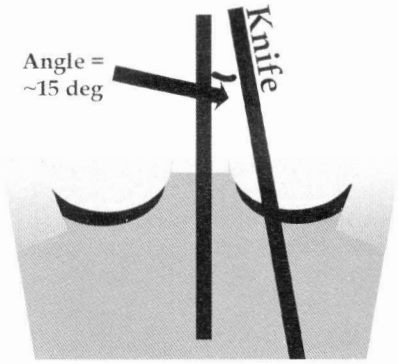

Figure 7

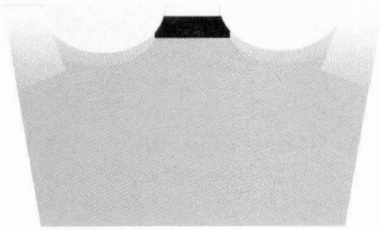

Figure 9

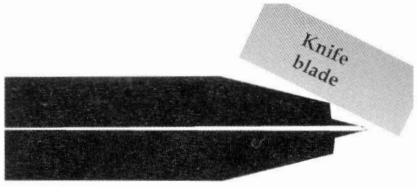

Figure 8

Figure 8. File gently on the middle of the reed tip until there is no more visible shelf as seen from a side view.

5.

At this point, the reed should look approximately like that in Figure 1. It is now time to shave the heart (black area of Figure 10) to the appropriate measurements. These measurements will differ based on your reed style; however, it is common that the heart is left much too thick.

6.

After soaking, you may find that the very tip is too thick all the way across the reed or at specific areas like the rails. Thicker regions are best discovered by watching the tip as you close it slowly between your thumb and index finger. The reed tip should close gradually from the corners to the middle. Areas that close last or do not close at all are too thick. If you find such regions, use the techniques found in steps 2, 3, or 4, depending on your needs. A dial indicator can also be used to determine adherence to basic principles of reed symmetry. ◆

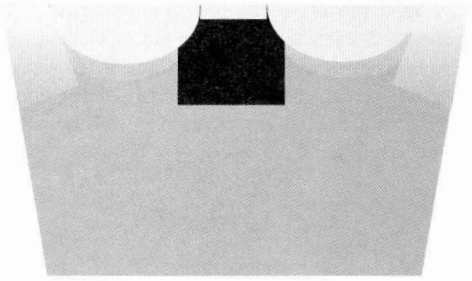

Figure 10

Adam Schwalje *is currently instructor of bassoon at the University of Colorado at Boulder, where he is a sabbatical replacement for* ***Yoshiyuki Ishikawa.*** *He is also studying for the DMA at the Cincinnati College - Conservatory of Music with* ***William Winstead.*** *Adam earned the Bachelor of Music, Master of Music, and Bachelor of Arts in Molecular Biology degrees from the University of Colorado at Boulder.*