

# MAKER'S BENCH

## Shapes of Things

by Matt Wehling

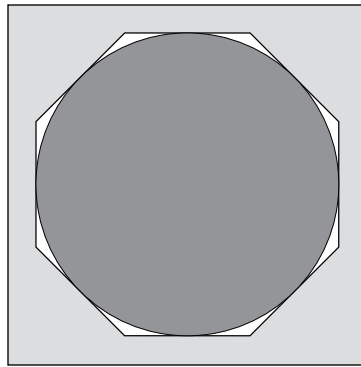
Quite a few questions I am asked by musicians center around the shape of the bow: How is an octagonal bow different from a round bow? Which is better? Often these questions are put in the form that lets me know the person already has an opinion, of which he or she wants confirmation. "An octagonal bow will be stronger, right?" "A round bow will have a rounder sound, won't it?"

As with so many questions involving violins and bows (and life), the answer is, it depends. Depends on the player, depends on the instrument, and, probably more than anything else, depends on the skill of the maker.

The most common belief concerning an octagonal bow is that octagonal bows are inherently stronger than round bows. Proponents of this belief hold that this is true because for a given thickness of stick, an octagon will have a larger cross section of wood than a circle, and with more wood, it will be stronger (see illustration). While that's true, it doesn't take into account that the extra wood is going to mean extra weight. Because the bow needs to end up in a very specific weight and balance range, a good maker will need to make the stick thinner on an octagonal bow than on a round bow in order to have the end result not be too heavy and balanced too far toward the tip. And to make the bow thinner, the maker will take off extra wood, making the bow less stiff. In addition, the amount of extra wood in an octagonal bow is only about 5% more, probably less than many people imagine.

Octagonal bows are more common in German factory bows than in French factory bows. One could explain this by resorting to a cliché that German workers pride themselves on the precision of the work while French factories were more concerned with speed of execution and results. Like many clichés, this is rooted in some truth. However, I wouldn't want to imply that French factory bows are inherently better than German ones, as there are some very good German bows out there.

The belief that an octagonal bow is stronger is propagated by the large amount of clubby, overweight, poorly balanced octagonal bows that are on the market. Commercial bows available in the United States for most of the last 150 years were predominantly made in Germany. The German emphasis on craftsmanship placed a premium on octagonal bows, often at the expense of maximizing the potential of a given piece of wood. A good maker is most concerned about how the bow will play in the end, and whether this means round or



Cross sections of a round and octagonal stick

octagonal is of secondary importance.

In my own making, I usually don't worry about which shape the bow is going to be until near the end of the process. The bow is telling me what it wants to be. If I'm getting near the end and the bow already feels a bit heavier toward the frog than I might like, I'll keep it octagonal. Conversely, if the weight's a little heavy and the bow feels tip heavy, I'll round it off. If a player specifically requests an octagonal bow I'll generally start with a piece of wood that's slightly less dense, as I know the octagonal shape will be prone to taking the balance point nearer the tip. The lighter wood will keep the balance closer to where I want it.

The other main generalization I hear about bows is that round bows have a rounder sound than octagonal bows. I'm told the logic was that since the octagonal bow has sharp corners, the sound coming out would be sharper. In preparing for this article, I talked to owners of three violin

shops, all of whom say some people believe this, and yet all three of the shops feel that it is in no way true. If you look at a variety of octagonal bows, you'll see that there is a spectrum of how sharp the corners are finished...some bows are fairly octagonal with somewhat rounded corners, others very octagonal with very sharp corners. But I can't imagine that if you wanted a particularly bright bow you'd be best off looking for a bow that was finished with particularly sharp corners. I just don't think this logic holds up to scrutiny at all.

For further proof that bow shape is not necessarily an indicator of tone production one need look no further than the top end of the market. After about 1805, the great master François Tourte made almost all of his bows octagonal, yet his bows are noted for their well-rounded tone and ability for a player to find a variety of shades of sound from within them. A similar example would be the output of F.N. Voirin, who made a large percentage of his bows octagonal, yet the octagonal bows are not thought of as having tone any less full than his round bows.

I believe this is because, as a true master maker, Voirin was most interested in pulling the best bow he could make out of a particular piece of wood, and wasn't concerned about the final shape of the bow. Similarly, when looking at a bow, I believe the shape shouldn't be a factor in whether you like a bow or not. By automatically excluding bows due to their shape, either round or octagonal, you might miss the best bow you've played in your career (thus far). Claire Givens put it this way, "Let the bow tell you what it wants to tell you." And if the bow that speaks to you is of one shape or the other, so be it.

*Matt Wehling's experience includes studying bow making in France for five years with modern French masters. In 2002 and 2006 he was awarded Gold Medals for his violin and cello bows from the Violin Society of America, and he has contributed to Strings and The Strad magazines. His shop is in Northfield. †*