

Boxmaster Tools

People that know me know there are two things in particular about woodturning that I truly love- turning boxes and new woodturning tools. So when I heard about some tools developed by an accomplished box turner I just had to see what they were all about.

Jimmie Allen is the owner of Boxmaster Tools (<http://boxmastertools.com/>) and on the front page of his website is a sampling of his wonderful boxes. A friend, Willie Simmons, met Jimmie at the Portland AAW Symposium and because of that chance meeting Jimmie called me and we discussed box turning. One thing led to another and Jimmie sent me a few of his tools to try out.

Here is the sampling of his tool line that he sent for me to try- (Fig. 1) and a closer view of the negative rake grinds (Fig. 2).



Fig. 1- Boxmaster Tools



Fig. 2- Negative rake grinds

Figure 1 shows an 8" long handle with a 5/8" bore to accept both sizes of tools when using the available 1/2" reducer. Handles are available in eight inch and 12 inch lengths with either a 1/2" or 5/8" bore. The unhandled tools are from top to bottom:

3/4" Long and Strong Curved Negative Rake Scraper

1/2" Curved Negative Rake Scraper

1/2" Lid and Tenon Tool

5/8" Curved Negative Rake Scraper

5/8" Straight Sided, Flat Bottom Box Tool

5/8" Round Nose Scraper

5/8" Flare Tool

5/8" Detail Tool

The observant viewer will notice that most of the tools are double-ended providing extra versatility and value. About half the length of these 10 inch unhandled tools can be inserted into the handle which provides great stability.

The tools arrived with the cutting ends encased in a plastic material similar to that which is on new saw blades when purchased. Removing this coating revealed a razor sharp edge.

By the way the holes in the tool shafts are used during the tempering/hardening process. Jimmie states that by hanging the tools during the hardening process he has had no tools to warp which can happen when tools are allowed to lay flat in the ovens. He uses the same hardening/tempering facilities as D-Way Tools of which he will take over ownership next year.

So How Do They Work?

After unpacking and giving them the once over I was anxious to put steel to wood. And what kind of project should I turn to test Boxmaster Tools? It should be obvious that I would be trying them out on a box project. I mulled over various box designs I have turned and decided upon one which I thought would be best to give me a chance to use as many of the new tools as I could.

Let's Begin With the Lid

I put a blank onto the lathe, rounded it up and parted it into lid and body sections with the lid section still in the chuck. After hogging out a lot of the waste with a detail gouge it was time to try out my first Boxmaster tool. The ½" Lid and Tenon tool is the tool of choice for cutting the interior lid mortise parallel and square. The long angled bevel on the left side and the narrow square cornered cutting tip makes it easy to plunge the scraper directly into the end grain and remove the waste ending up with a square shoulder inside the lid (Fig. 3).



Figure 3- Cutting the lid mortise

Once the sides of the mortise were checked and proven parallel it was time to shape the inside top area of the lid. I had planned on a dome shape for that surface. I decided to start shaping that area with the 1/2" right hand curved negative rake scraper. Ribbons of end grain wood chips poured off the razor sharp cutting edge (Fig. 4) and (Fig. 5).



Figure 4- Shaping the interior dome



Figure 5- Ribbons of end grain

Once the basic dome shape was established I switched to the 3/4" Long and Strong Curved Negative Rake Scraper to refine the shape. The larger size and extra mass made it very easy to obtain a uniform curve on the inside of the lid (Fig. 6).



Figure 6- Refining the dome shape

That last step was to true up the bottom edge of the lid. I used the 1/2" Straight Skew on the opposite end of the 1/2" Lid and Tenon tool for that job. Doing so assured that the bottom of the lid was flat and in the same plane.

The end grain surfaces on the box lid were cut remarkably clean and required very little in the way of sanding as seen in Figure 7.



Figure 7- Cleanly cut end grain

Next: Turn the Body

After applying a little finish to the inside of the lid I mounted the box body blank. I trued up the outside diameter and used the ½" Straight Skew to establish the body flange upon which the lid will fit. This razor sharp tool peeled off shavings cleanly (Fig. 8).



Figure 8- Cutting the body tenon

Once the tenon was sized so that the lid would just begin to fit I quickly hollowed out the body of the box with a gouge. Then I switched to the 5/8" Straight Sided, Flat Bottom Box Tool. This tool looks much like the 1/2" Lid and Tenon Tool but it has a slight radius on the left corner which allows the user to easily cut an eased corner without all the fuss and muss of a square corner which can be tedious and hard to sand. In a stepwise fashion I pushed the long side of the tool's cutting edge straight into the waste material and established a uniform depth (Fig. 9). Once the depth was established all the way to the outside corner it was just a matter of cleanly cutting the rest of the bottom flat (Fig. 10). This was easily accomplished with the Flat Bottom Box Tool. Some sanding was necessary on the long grain but the end grain of the bottom was cut quite smooth and only needed some touch up sanding.



Figure 9- Hollowing the box body



Figure 10- Straight sides and flat bottom

On to the Outside of the Lid

Once the interior of the body was sanded and finished the body tenon was adjusted so that the lid could be jam fit onto the body. By doing so the shape of the lid and body could be turned at the same time. I quickly turned off the waste on the body and established the basic dimensions and shape of the lid with a gouge.

After the diameter of the body was established I used the 5/8" Round Nose Scraper to undercut the lid and blend the curve into the straight sides of the body (Fig. 11).



Figure 11- Blending the undercut lid to the body

Next it was time to shape the top of the lid. I used the 5/8" Flare Tool for that operation. Its slight curve made it easy to cut the oriental shape I had in mind for the two steps of the box lid (Fig. 12). The final cut surface almost did not need to be sanded (Fig. 13).



Figure 12- Shaping the lid



Fig. 13- The final cut surface of the lid

Finishing Up

After some sanding and application of finish. I reversed the body of the box and removed the tenon with a spindle gouge. I used the 5/8" Round Nose Scraper to dish out a recess on the bottom for a finished appearance. A little sanding and some finish and my box

was done (Fig. 14) and (Fig. 15). I didn't use every tool in my Boxmaster Tool kit but I certainly used many of them.



Fig. 14- Finished box



Fig. 15- Open view

Final Thoughts

Early in my box turning days I used scrapers more than I currently do but every box I turn has some operations that are best done with a scraper. Those operations and many others I attempted with the Boxmaster Tools were all done well. Even when I was cutting a combination of side and end grain like the curve on the underside of the lid, the cut was nearly flawless. The performance of these tools on end grain was exceptional. Whenever you can cut the end grain of a dense timber so cleanly that it glistens with smoothness that is proof of an exceptional cut. And best of all that smoothness reduces the need for excessive sanding which can cause heat checking in critical short end grain surfaces such as the bottom of a box or its lid.

Boxmaster Tools exceeded my expectations. They arrived beautifully finished and razor sharp. The handle is comfortable and retains enough mass to provide excellent control in use. The socket screws firmly lock the tools in place. The reducer functions well but I think I may purchase a separate 1/2" handle to avoid its use. You really can't have enough tools or handles, right?

The variety of tool shapes offered by Boxmaster Tools opens up a lot of opportunities and solutions for turners to shape and clean up areas which might be difficult because of design. The long and strong curved negative rake scraper is a beast and will certainly have applications in other areas of turning such as when smoothing curves on bowls or removing tear out. There is good value in the tools as most are double ended. All in all I enjoyed using the Boxmaster Tools Jimmie Allen sent for me to test and they will be welcome additions to my woodturning arsenal.