

## Finishing your turnings

By Fred Holder

Finishing seems to be another one of those things that is special to the individual turner. Each of us seem to develop our own particular finish for our turnings. In the process of arriving at that finish, we may have tried nearly every commercially available finish on the market. What seems to work best for us may not work at all for the fellow down the street. I wish I could give you the magic finish that would eliminate all of your problems. I'm afraid that I cannot do that, I can only give you some ideas based on the finishes that I've used and what the results have been for me.

When we talk about finishing a piece we are talking about a whole lot more than applying some lacquer from a spray can to the piece that you've just turned. Before we get into this subject too far, I would like to establish what I consider finishing. The *finishing of a turned piece* involves two stages: (1) smoothing the work by scraping, sanding, burnishing with shavings, etc. and (2) sealing the smoothed surface with a product of some sort, usually a product containing oil or varnish or both.

Wally Dickerman, who belongs to three of the clubs that I belong to, and who has been turning wood for 60 years, produces beautiful, thin-walled vessels that simply shine. Wally says the shine must be put on before the finishing medium or sealer is applied to the wood. He sands to 1200 or finer grits of sandpaper. Then he applies his finish. I understand that Wally may spend an entire day applying the finish to a piece he has turned, and that may be an understatement. Whatever he does it shows in the quality of the finished piece. Wally does what many of us do not do. He makes the wood as smooth as he possibly can before he begins to apply a finish to the wood. In reality, Wally finishes his wood with sandpaper and then seals in the finish.

Personally, I'm a bit lazy. I belong to the, "I hate to sand club." I keep threatening to buy a sandblaster and start finishing my pieces with a sandblasted finish as do several of the well-known turners. Perhaps, they also belong to the "I hate to sand club."

For a long time, I started with about 100 or 120 grit paper and sanded down to 220 or 240 grit and then quit. (I've moved on to 400 and sometimes 600 grits in the last couple of years.) I rubbed on some oil and let it go at that, and sometimes applied some wax over the oil. This finish never did shine. However, if the item is to be

used, say as a salad bowl, it shouldn't shine. It should be treated with an oil that can be used occasionally to renew the finish by the owner. There are a number of different ideas here. Some turners recommend mineral oil. Others recommend cooking oils such as olive oil, peanut oil, etc. Some turners use linseed oil or Danish oil. I personally use peanut oil on many of my kitchen items. I've also used a commercial mixture of nut oils called, "Preserve," that I like very well. Preserve dries within about 24 hours, whereas many of the other oils never really dry or they take several days to dry, which can be a pain. Any item finished with oil will need to be refreshed occasionally. You should advise your customer about the type of oil to use to refresh the piece after washing or simply after a good deal of time has gone past. Before we start applying oil, we need to finish the wood and prepare it for stage 2, application of the sealer.

### **Making it Smooth**

I realize that quite a number of prominent turners these days are doing things different from "making it smooth" when they finish a turning. Some of them are sand blasting, stippling, grooving, etc., but for the most part, the average turner is "making their work as smooth as they can." For most of us this means sanding with progressively finer sandpaper up to 240 to 600 grit and maybe a little burnishing with a hand full of shavings.

Jim Hume, who belongs to some of the same clubs that I do, is an artist that creates beautiful pieces. I once ask Jim how fine of sandpaper he uses. He replied, "I don't use sandpaper at all, it dulls the carving tools." Jim uses the lathe to make things round and then he finishes them by carving and hand scraping with cabinet scrapers or other means, but never uses sandpaper. It is not uncommon for him to spend 100 to 300 hours on one of his pieces. The end result shows.

Again, most of us are going to use sandpaper. In his book, "*Turning Wood*," Richard Raffan recommends sanding with hand held sandpaper from 120 grit down to 240 grit. He indicates that for most of the work that he does, work intended for use, that 240 grit is fine enough. I believe that most of the production turners; i.e., people who make a living from their turning, do not sand much below 240 grit. People aren't going to pay for pieces that you have put that extra time in to sand down to 600, 800, or 1200 grit on the general market. If you are selling in galleries, that may be a different thing, but I've read many places that no woodturner makes a living off of his gallery sales. They are nice supplementary income, but the groceries and rent come from the production work, the salad bowls, the spurtles, the scoops, tops, and architectural pieces such as spindles, newel posts, etc.

In one of his videos, Richard Raffan points out that you can sand an item in much less time with a rotary sander mounted in a drill motor that has replaceable disks with different levels of grit. I never did buy one of the kind that uses a Velcro Fastener type. My first one was a two-inch diameter unit with about a 3/4" foam backing. I've worn out several of these and lots of sanding disks. I generally keep disks on hand from about 60 grit to 400 grit. These are available from a number of locations, but I've found the disks from Klingspore's Sanding Catalog to be about the best available. I recently added one of Klingspore's one inch disk units and find it works much better on the inside of smaller bowls and on cleaning up the foot of a bowl after you've finish turned the foot or parted off from the waste block and are simply cleaning it up a bit without re-chucking to turn the foot.

About a year ago, Vic Wood was here in Washington from Australia on a demonstration tour and I purchased one of his hand-held, self-powered rotary sanding units. This unit uses a three-inch disk and is powered by the rotation of the wood. You apply the disk to the rotating wood and it revolves with varying speeds depending upon the diameter, or perhaps I should say the surface speed, of the wood. This thing really gets up and whistles at times. For many things (outside of bowls, balls, spindle work, etc.) this system works great. It works well on the inside of larger bowls, say 10" and larger. I think this may be because a three-inch disk is too large for the inside of bowls under about 10". Anyway, the rotary sanding disk with interchangeable disk is an excellent way to go. It is quite a bit faster than hand-held sandpaper and, I believe, is less likely to leave scratches in the surface of your turning. Maybe you don't want to purchase a rotary sander unit; you would rather use flat sandpaper. Ok, here's what I do. I cut the paper into strips around 2-1/2 to 3 inches wide and fold the strips into 1/3rds. This technique, I picked up from Richard Raffan, but I believe most turners use the same idea. Paper folded this way simply works better, but it sometimes burns your fingers. I use a piece of foam rubber about 2" to 2-1/2" square as a backer between the sandpaper and my fingers. This keeps the heat away from my fingers and, I believe, does a better job on the surface of the bowl or other turned object. Others use a thin piece of soft leather as a cushion and heat insulator. This works pretty well, but I'm partial to the foam.

Ok, we've selected a sanding technique--all of those described above will eventually get the wood smooth. Now what? Let's start sanding. Normally, I start sanding with the finest grit that will smooth the surface of the turning. Sometimes you start sanding and find that you can't get out all of the flaws with that grit of paper, then you go back to a coarser grit. If the wood has been exceptionally stubborn and the turned surface is not level; i.e., there are high and low areas

caused by chatter, poor chisel technique, excessively heavy scraping, etc.; the sandpaper needs to be fairly coarse, 80 grit, 60 grit, or even 40 grit. You can do a lot of shaping with 40 grit sandpaper, but you can also put in some real deep and hard-to-remove scratches. If I can't sand clean quickly with 100 grit paper, I suspect that I need to go back to the turning tools if at all possible and I often do so. When turning with a skew, I generally try to start sanding with 240 grit paper to simply sand off the little ridges that I may have left with the tool. Often the surface left by a skew chisel is best burnished with a hand full of shavings and left as is.

Use the piece of sandpaper of a particular grit until the surface is as smooth as that sandpaper is likely to make it and until all of the scratches made by a coarser grit have been removed. Then, move to the next finer grit. By having the sandpaper folded in thirds, you have three fresh surfaces to work with and the piece folded inside has grit against the back of the out-fold and helps hold it in place. I generally like to start with 100 or 150 grit, move to about 180 grit, then 220 or 240 grit, then to 320 grit and finally to 400 grit. On some woods, I can start with 240 grit and then jump to 400 grit and then to 600 grit with excellent results. Woods such as Ironwood, Lignum vitae, Red Heart, Ziricote, Cocobolo, and other exotics or very hard woods can generally be sanded this way, starting with 240 and going to 600 grits. It really doesn't matter whether you are using hand held sandpaper or rotary sanding devices, the grit levels should be about the same. A handful of fine shavings held against the rotating surface will burnish an already smooth surface to simply make it shine. I've also used 0000 grade steel wool to good advantage at this point. This will burnish the surface to a shine. The better the shine from sanding and polishing, the better the finished piece will look.

Ok, you've done all of the damage you can do with the sandpaper. We hope you haven't eliminated any of the details of the turning, rounded over any corners that should have remained sharp, or done any damage to the overall appearance of the piece. Remember, sanding is to make it smooth and make it look better, not to change its shape. Personally, I would rather leave it a bit rough than ruin the shape with heavy sanding. Now, it's time to seal the surface.

### **Sealing the Surface**

Getting to this point varies greatly from turner to turner and going beyond here has an even greater variance. It seems that everyone has something different that he/she likes to use to seal the surface of their turnings. On the one side is a simple oil finish, applied, allowed to soak in, wiped off, and then burnished with a rag. Here, the variations are in the oil used as well as each turner's needs to try all of those nontoxic oils to come up with the one that works best for them. Oils like

Tung Oil, for example, have a lot of other things in them: hardeners, varnishes, etc. I use peanut oil on many items I turn, especially if they are for use in the kitchen. I make wooden spatulas and always finish these with peanut oil, which is much cheaper than “Preserve”, but doesn’t dry as quickly. I simply flood the surface and rub it in as much as possible. (Some production turners will have a tub of oil, such as mineral oil, and will throw the piece into the oil when it comes off of the lathe. They will let it soak for half an hour or more before wiping and lightly buffing.) I let it soak for a while and then wipe off the oil and buff it with a soft cloth. You can have a fairly shiny surface if your wood was shiny before you applied the oil. Sometimes, the oil will seem to raise the grain of the wood. When this happens, I like to cut it back with 400 or 600 grit wet/dry sandpaper with the sandpaper dipped in oil. When done sanding, wipe and buff. I also use this finish on my spinner tops. The oil brings the wood to life and is nontoxic in case the top goes into a mouth. Tops don’t need a high gloss finish, because they are going to be used and abused. A gloss finish would look worse than an oiled finish in a very short time.

### **Wax Finishes**

I’ve used a number of different waxes from straight beeswax that came from a friend who kept bees to auto paste wax. The best I’ve used is a beeswax-based product called *Clapham’s Salad Bowl Finish*. The Clapham family are Canadian bee keepers who looked for a use for their excess beeswax. They came up with a number of products, the two of most interest to woodturners or other woodworkers is their *Clapham’s Beeswax Polish*, which I like to use as a sanding medium when I’m approaching near finish sanding and I’m planning to finish with wax. I apply the Clapham’s Beeswax Polish and then sand. Do this the last two or three grits of sandpaper and you have an ultra smooth finish. Apply one more coat after all sanding and buff off. Then apply a coat of *Clapham’s Salad Bowl Finish* and buff to a shine. This makes an excellent finish for salad bowls if you don’t want to use oil and it will give you a much higher polish than you can ever get with just oil. These people also sell block beeswax if you wish to use pure beeswax for some purpose.

### **French Polish**

In one of her videos, Bonnie Klein tells how to make up a mixture that provides a near French Polish when applied. I use this finish on all of my bottle stoppers and on small bowls. I haven’t had real good luck using it on larger bowls. This finish is made up of shellac, alcohol, and linseed oil, equal parts of each. I use commercially mixed shellac, rubbing alcohol, and boiled linseed oil. Shake the bottle before applying. Apply enough to soak into the wood and then, with the

lathe running, buff in the finish using the wet part of the rag. I then shift to a dry area on the rag and buff dry. I then use 400 or 600 grit wet/dry sandpaper or 0000 steel wool to lightly take off any whiskers. Then I apply the wet area of the rag again to essentially give the piece a French Polish. It works really well on small items like bottle stoppers and small bowls. The higher the polish of the wood before applying the finish, the higher the gloss after French Polishing. I read somewhere about one turner who sands his work to a high gloss and floods the surface with Red Label Hot Stuff CA Glue. He allows the glue to set naturally, no accelerator, and then sands with 400 or 600 grit or finer. Then he applies the French Polish to obtain a super high gloss finish that is impervious to water, alcohol, etc. That sounds like a rather expensive finish, but then it depends upon how much you are selling your work for or whether you are simply turning it for your own use. In either case this is a possible way to really get a fine finish. You must always remember when working with CA (super glue) that you can glue your fingers together or to something else including the workpiece or the lathe. Keep the special CA glue solvent handy, just in case.

### **Varnish, Lacquer, and all of those Other Things**

I don't personally care for the painted on or sprayed on finishes, although I do occasionally use them. I've used spray on clear Deft with some good results, but the fumes for this stuff makes it hard for my wife to breath and it stays with the piece for several days. I was always afraid that it might give a customer breathing problems, too. We don't want any lawsuits! This caused it to be eliminated from my list of possibles. I've used Durathane on a few pieces with some pretty fair results. The spray on kind works better for me than brush on stuff. I apply this stuff in a light coat, and sand it away with 600 grit sandpaper and 0000 steel wool the following day. Then another coat and repeat the sanding away. I do this for four or five applications over a week's time and leave the last coat as sprayed. Makes a very shiny bowl that looked like it had been dipped in clear plastic to me. But people stood in line to buy one of my pieces finished this way--a 10-inch natural edge bowl made of maple. It was sold at an art show this spring. At least six people wanted to buy it. Obviously, I priced it too low!