Trade Secrets

BURNISHING VARNISH TO A FINE POLISH

JOE ROBSON describes how he achieves a deep sheen without using abrasives

When I want to create a varnish with a bright but not glassy surface, and one which closely hugs the wood’s surface characteristics (what I think of as its topography), I use a method of burnishing the varnish that relies on the elasticity and polishing qualities of the varnish itself to bring out the finished surface, using very little abrasion. Instead of relying on a series of increasingly fine abrasives to create a sheen, I rub the varnish with pads and cloths that burnish the surface and the varnish without scratching it. This method is more time-consuming than using abrasives, but it does not create scratches that will have to be filled by subsequent coats of varnish or surface polishes. I use a long oil varnish with a ratio of one part resin to one part linseed oil.

STEPS 1–2

[1] In my tool box for burnishing varnish, I have a section of white Scotch-Brite pad (a woven plastic polishing pad with no added abrasive); some coarse linen cloth (in my case, the linen is 350-year-old homespun and came from Sweden with my wife’s family – its coarse texture, rather than its age, is important); and some fine linen cloth. I also use some soft t-shirt cotton cloth: at least three-quarters of the burnishing is done with this cotton cloth. Finally, there is a good chamois skin, which is the ultimate polishing tool.

The procedure is simple and can be varied according to the type of surface you want to create and the progress of the varnishing. However, the concept remains the same at any stage of the process: I rub the surface until it looks good and then I move on to the next step. I treat each phase in a similar way, from white wood to ground to colour to final varnish coatings.

[2] After the surface preparation is complete, I rub the white wood with the coarse linen cloth, then the fine linen cloth and then the soft cotton cloth. After applying the ground I rub the surface with the fine linen and then the soft cotton cloth. This prepares a smooth, deeply reflective surface for varnishing.
STEPS 3–6

[3] During the process of applying colour and varnish the procedure shifts slightly. I begin with the white Scotch-Brite pad, which removes major dust imperfections and takes care of some minor levelling of the varnish.


Rubbing continues with a fine linen cloth (left) and a cotton cloth (right).

[5] Rubbing continues with a fine linen cloth (left) and a cotton cloth (right).

The ‘slip’ (left) and ‘squeak’ (right) method shows the time to start burnishing.

5. Deciding when to burnish a newly varnished surface is a judgement based partly on experience and partly on experimentation. One way to judge is familiar to many makers. There is a point in the process of oil varnishing when a coat is ‘dry’ and you want to put on the next coat, but you are reluctant to because the next coat might ‘bite through’ and dissolve the undercoat. This is the point where burnishing will allow you to smooth the surface to an even polish and remove minor imperfections. Another test is the ‘slip and squeak’ method. Rub the inner surface of your wrist lightly across the surface: it should slide easily (slip) with no sensation of stickiness. Then press your thumbs gently on the surface and push. You should hear a squeak but feel no stickiness.


A kit for final polishing a well-burnished surface consists of rottenstone (the finest natural polishing powder, made from weathered and decomposed siliceous limestone), linseed oil, flour and a rubbing pad made from cotton cloth. I make two pads by wrapping pieces of t-shirt material together. One pad is fat and tight, and is intended for use on the back and top. The other is smaller and looser, for use in polishing the ribs, scroll and details.
After polishing with rottenstone, I gently wipe the surface with cotton cloth. To remove the residual linseed oil I dust the surface thoroughly with flour and allow the flour to remain there for about five minutes. I then wipe the surface with a clean cloth; all the remaining linseed oil is removed with the flour.

When using the rottenstone, I start by dipping the pad into the linseed oil, allowing the oil to penetrate the pad fully and then squeezing out any excess oil. I then dip the pad into the rottenstone. I polish the surface using stiff but not excessive pressure, and I recharge the pad with oil and rottenstone if it begins to drag or feel dry on the surface.

When the flour has been completely removed, I return to the cotton cloth and chamois. I use the cotton cloth to make sure that the oil has been entirely removed. I now polish the entire instrument with the chamois. I use a piece of chamois to hold the instrument in order to avoid transferring oil from my hands to the surface.

The burnishing method eliminates the haze caused by successive abrasions.

The instrument is now bright and has a deep sheen which shows minimal film thickness and no residual haze from successive abrasions. There is no need to add 'polish' to the surface to correct the haze.

In next month’s Trade Secrets the process behind creating a Turkish kemencé.