French Polishing

The disappearing art of getting a fine shellac finish

To many woodworkers the art of satin-gloss French polishing—the building up of a thin, fine shellac finish with a cloth pad—is a deservedly dying one. Not only docs it take much skill and experience to produce that transparent, satin-gloss that it's famous for, but also much elbow grease.

As a result, in this day of seemingly instant, effortless activity, French polishing is given short shrift, rarely or briefly mentioned in books on wood finishing.

To Anthony Arlotta, a former cabinetmaker and now a professional finisher and refinisher for many years in New York City, this is a sad state of affairs. He can understand why French polishing for commercially made woodwork has become economically impractical except for the finest antiques. But for the amateur craftsman, who has already spent dozens or even hundreds of hours making a piece of furniture or a marquetry panel, the extra several hours that French polishing takes, compared to the instant finishes, is well worth it. It gives a smooth, thin finish full of luster but without the thick high gloss associated with lacquer.

For refinishing work, it can be used over old shellac, but not over old varnish or lacquer because of the poor bond.

The advantages of French polishing over varnish ana lacquer are not only its beauty, but also its relative practicality. That is, if the finish does get scratched or damaged, it's a relatively easy process to rebuild and blend in the new shellac buildup. In fact, Arlotta demonstrates this dramatically by putting some 150 or 180 grit sandpaper to a finished piece, and then, in a few minutes of rubbing, getting rid of the intentional scratches.

French polish gives chessboard by A. Miele a fine finish.

There are disadvantages, however. Shellac is water resistant but not waterproof as some varnishes are. And, of course, it is not alcohol resistant, since that is the solvent for shellac. But given these drawbacks, there's no reason why French polishing can't be used for any fine furniture that is properly cared for, especially where the beauty of the grain and figure of the wood is to be highlighted.

For French polishing, Arlotta uses age old techniques, such as mixing his own shellac. (He considers ready-made French polishes inferior, but he does use them—on the undersides of furniture where it doesn't show.) He takes orange shellac flakes or crushed orange shellac buttons, fills a jar about three-quarters full with the dry shellac, and then fills the jar with methyl or wood alcohol, or columbine spirits, as it is sometimes called.

It takes about a week for the flakes or chips to dissolve. Every day he gives the mixture a stir or two; after a week the flakes have dissolved into an orange syrupy mixture. He strains it through cheesecloth if necessary, especially if the buttons were used.

Arlotta doesn't use bleached or white shellac because he's never sure of the impurities in it, and if it's the least bit old, it doesn't dry. Arlotta says the orange shellac has an indefinite shelf life if a skim coat of alcohol is poured over the top and the jar is tightly sealed. The color is not a problem because the shellac is put on in such a thin coat.

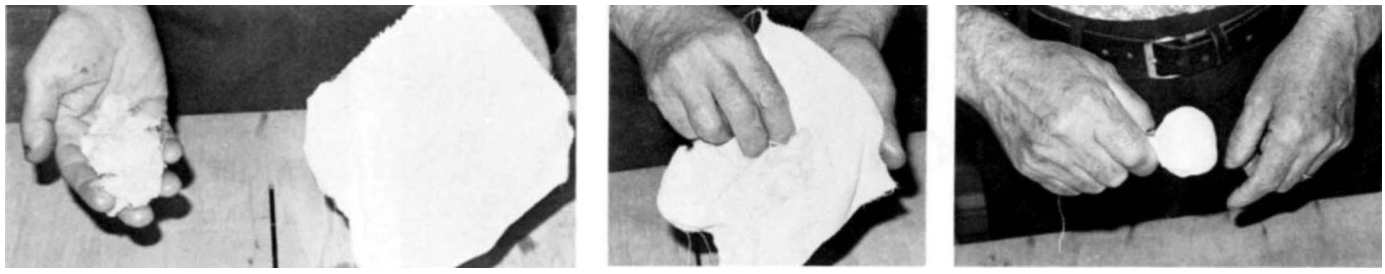
If the wood is to be stained before finishing, only *water-based* aniline dyes should be used. Otherwise the rubbing process of French polishing could lift up stains that have other base formulations.

In fact, to create a warmth and mellowness in the wood, Arlotta likes to stain all of his pieces (regardless of the wood), with a weak solution of yellow stain. If kept pale, the stain does not really turn the wood yellow, but does give it a warmth and depth that is hard to match.

(As always in the finishing process, it's best to do extensive experimenting beforehand, for instance trying various dilutions of the yellow stain on a spare piece of wood. And, of course, it's prudent to go through the whole French polishing sequence on scrap before trying it on a treasured piece.)

Water stain raises the grain, so wash with water, dry, and sand before you stain. After staining you should give it another light sanding with very fine sandpaper.

The first step in French polishing is to put on a very thin or light wash coat of shellac (two parts alcohol, one part shellac



Making up a pad and working in the white pumice sprinkled on the surface, which will fill pores.

stock). This is done with a pad made up of a small ball of cotton wool or cotton waste wrapped into a larger square of cotton or natural fiber cloth and twisted into a ball. The shellac should not be put on heavily as its main purpose is to serve as a binder for the subsequent filling step.

After the shellac dries, usually in a half hour or less, Arlotta goes immediately to the filling process, using 4F pumice stone as filler.

A new pad is made up, this time with more rugged linen or tight gabardine as the pad material (because pumice is a strong abrasive). He sprinkles some pumice lightly on the surface of the wood, the pad is dampened with alcohol, and the pumice is rubbed hard into the pores. As with all French polishing steps, the initial rubbing should be in tight moving circles, then looser figure eights, and finally long straight strokes with the grain. Don't let the pad stop its motion, but keep it moving constantly. Otherwise, you'll get cloth marks where the shellac hardens.

What the combination of the alcohol and the rubbing does is to soften the shellac undercoat and imbed the pumice in it.

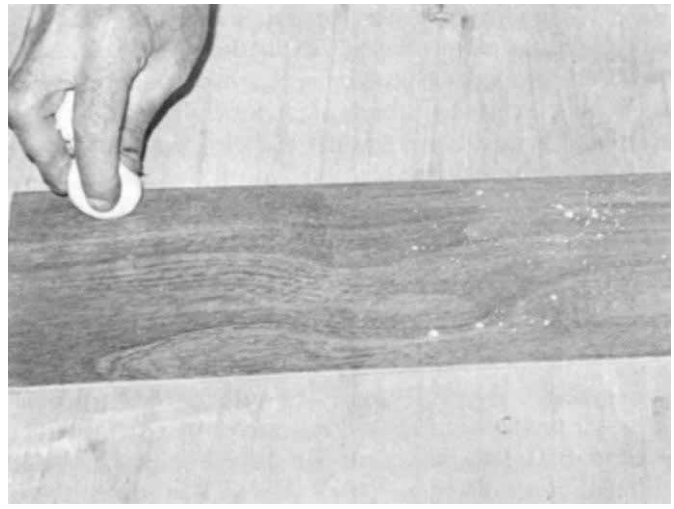
When the pumice has disappeared, sprinkle some more on, and add more alcohol to the pad. Keep on with this until the pores are completely filled, the surface seems absolutely flat, and the circular stroke marks have disappeared.

Then put it aside for a week. The shellac will dry completely and shrink slightly, exposing some of the pores again. Do another pumice filling sequence and again put it aside, this time for fewer days. When the surface stays completely flat, the wood is ready for the final polishing sequence.

(It's at this point, too, that any blemishes or defects in the wood would be fixed using wood powders.)

But assuming a blemish-free surface, a new cotton or wool pad is made up. Some shellac stock is poured onto the inside ball (the outer cloth then acts as a filter). The pad is squeezed to spread the shellac throughout, and flattened, and then just enough alcohol is put on it to make it lose some of its tacky feeling. A drop or two of lemon oil is touched here and there onto the wood surface (to act as a lubricant), and the padding process is begun.

Use the same small overlapping circles to put on the shellac. Glide the pad on and glide it off, but never stop its motion. Put enough pressure on the pad to rub the shellac in, but not so much that it takes off or "burns" the coat underneath. Recharge the pad with shellac and alcohol as needed. Add more lemon oil occasionally, and keep up the rubbing process, going from the circular strokes to the figure eights to the long straight strokes.



Repeat the process as often as you want, until you've built up the desired finish. You'll know that you've rubbed enough when the stroke marks disappear. The longer into the padding process, the lighter the pressure on the pad should be.

At the end, you'll want to apply alcohol alone to the surface to take up the lemon oil and give the final polish. Arlotta uses a new pad that is barely damp with alcohol and uses straight strokes with very light pressure. Stop when you've got the surface to where you want it.

That's the essence of French polishing. After the filling step you can build up the shellac finish as many times as you want—once or twice for a really spare finish, to several or many times for a heavier build up. There is no drying time between steps and you can pause or stop anywhere in the process (as long as you glide the pad off).

And if the finish itself does get damaged, you can sand the affected area with fine paper and rebuild it to match the overall piece, provided you have no deep dents or gouges.

Unlike lacquer and heavy varnishes, there's no solid film to crack or chip off. There's only a very thin coat of shellac that has been padded or polished on.

After the final polish, you should wait a few weeks before you put any protective coats of wax (like butcher's wax)—if you want to wax it. But it's really not necessary.

Good polishing! But remember, keep that pad moving!

[Note: If you are unable to find locally the materials mentioned, try H. Behlen and Bros., Inc., Box 698, Amsterdam, N.Y. 12010. They carry all the materials (both wholesale and retail). Minimum order is $25.00.]