

Notes from the Shopsmith Woodworking Academy

Finishing Touches — PART 6 — Paints & Stains

Any woodworker who's worked with hardwoods — walnut, cherry, oak, etc. — knows how rich the grain patterns and colors are when compared with ordinary softwoods. Unfortunately, however, there aren't many of us who can afford to build every project out of these expensive hardwoods.

Even when we do use hardwoods, there are times when we just aren't completely satisfied with the way our projects look once we've finished. Freshly-worked cherry, for example, is regularly stained a deep brown to make it look aged. And for those occasions when we need to change the color or appearance of the wood we're using — or even cover it over completely — there are hundreds of paints and stains available to do the job. By mixing different colors and tints or combining techniques, you can achieve almost any effect you want.

OIL STAINS

Probably the most common method of changing the color of wood is to use an oil stain. Oil stains are readily available and easy to apply, but they do have some disadvantages. First, they take a long time to dry between coats — 24 hours minimum; you can't apply varnish or paste wood fillers directly over them; the oils combine and the final finish looks muddy.

They also come in a limited range of colors and hues, but this can be remedied, somewhat. If you want to slightly alter the hue of an oil stain, buy the appropriate artist's oil pigment and mix it with your stain until you achieve the desired effect. For example, a little bit of "burnt umber" (deep brown) pigment will darken a light oak stain nicely. "Turkey red" (red-brown) pigment will redden it slightly. The secret is to test your mixtures on scrap wood and give it time to dry completely before applying it to your project.

Once you've mixed up the color you want, prepare your project by first wiping it down with a tack cloth to remove all dust residue. If you can't find tack cloths at your home center or hardware store, try an auto paint store — or make your own by sprinkling a little of the finish you plan to use (or a little varnish) on a piece of cheesecloth and working it in your hands until it becomes "tacky".

Next, seal the exposed end grains of your project with a little shellac and alcohol to keep them from absorbing more stain than the other parts of your project. There are also special stain-blocking products available for this purpose.

Select a wide, STIFF brush. Soft, flaccid brushes aren't particularly well suited for applying stains because their bristles won't get down into the pores of the wood. Always brush stains on *with* the grain of the wood. With each new brushful, start a few inches from your last brush mark and move towards the wood that's already been stained. This approach will help eliminate dark areas where the brush strokes overlap.

Stain one section of your project at a time – sides, front, back and finally, the top. If possible, always work with your surface in a horizontal position, turning the project as you go to avoid runs. Once you've finished each section, wipe off any excess stain with clean rag. If your stain appears uneven in any particular section, you can even it out by rubbing with a lightly oiled cloth. Recoat every 24 hours, until your stain deepens to your desired tone. BE PATIENT! More projects are ruined at the finishing stage than at any other...simply because woodworkers get impatient.

Water Stains

Though oil stains are easier to find and use, most professional woodworkers prefer water-based stains. Water is more readily absorbed by wood and this makes the stain more permanent. Water stains also come in many more colors than oil stains, and these colors can be blended to obtain an infinite variety of hues. They are also extremely economical...an ounce of water stain powder will usually cost less than a dollar and cover up to 150 square feet

However, as with oil stains there are disadvantages. Water tends to raise the grain of the wood during application and they cannot be applied to any project that has been previously finished because they simply won't penetrate a prior finish.

Prepare your surface by wetting it down with clear water, letting it dry, then sanding it with 3/0 Garnet paper. This will help minimize the grain raising when you apply your stain. Remove the excess by "tipping" with a dry brush. Allow four hours between coats.

Gel Stains

These are typically blends consisting of coloring pigments and aniline dyes in a thick, gel base. They are normally wiped on with a cloth and second and subsequent coats usually applied in about four hours. If you need to lighten them, you can usually do this with ordinary mineral spirits.

Paints

Stains will change the color of wood, but paints will cover it completely. There are many different paints to choose from, but the most common are oil-based, latex, enamel and milk paints.

Oil-based paint is an opaque, colored pigment suspended in oil with thinner and drier. It's available in an enormous variety of colors, both flat and glossy.

Latex is water soluble, dries quicker and covers better than oil-base, but gloss finish versions are not always available in all colors.

Enamel is simply an opaque, colored varnish. It's slower to dry than latex, but can be sanded and rubbed like a varnish to produce an extremely smooth finish with either a flat, satin or glossy appearance.

Milk paints are typically used to match the colored finishes on antique pieces or reproductions. They are usually water-based, produce a flat finish and can be purchased in dry powder form or pre-mixed for the woodworker's convenience.

When using paints, prepare the surface of your project by first filling the pores, dents and scratches, then sanding smooth with progressively finer abrasives. After removing all dust with a tack cloth, paint the entire project with the appropriate “undercoat” or primer. If you’re using enamel, thinned latex makes a good undercoat.. These undercoats help seal the wood and provide a good, hard “grab” for successive coats of paint.

If you wish, you can sand down the undercoat to make the project perfectly smooth. With a brush, coat the entire project in sections and keep each section horizontal (if possible) until it dries thoroughly to prevent drips and runs. If you’re working with enamel, use the same procedure you would for varnish — wipe it across the grain, then with the grain, then “tip” the wet surface to remove brush marks. Be sure to allow the recommended drying time between coats and lightly sand each coat, if desired.

Antiquing

You can combine painting and staining in a technique known as “antiquing”. This process highlights the raised areas of your project to give it a rich, aged look. It’s especially effective on intricately carved or turned surfaces.

Paint your project as you would, preferably with a light-colored paint. Allow time for the paint to dry completely. If you use latex paint, finish up with a coat of shellac.

Prepare an antiquing stain by mixing 4 ounces of artist’s oil pigment (your choice), 4 ounces of linseed oil, 2 tablespoons of turpentine and a teaspoon of drier. Apply this to your painted surface with a stiff brush. Wipe it on evenly, but not excessively.

As you finish each section, go back and wipe off as much of the stain as desired with a clean cloth. Remove more stain from the center of a section than around its edges. Then, go back over each section with a clean brush, “tipping” the stain and removing any harsh lines that may have been left when you wiped.

When you’re finished, the stain should remain in the groves and crevices, showing off the contours of the project. Flat areas should be light in the center, then progressively darker toward the edges. Don’t worry if you don’t get the effect you desire after the first try. The antiquing stain dries slowly, and you can easily wipe it all off and start over, if you like.