

liquid will under exposure evaporate a good share of the day's profits. Dirt and specks get into the uncovered can of varnish. Varnish, shellac and stain cups gather dirt when uncovered and not in use. Materials deteriorate when left uncovered, varnish particularly. In the well-ordered finishing-room such things do not, of course, occur. Another item worth calling attention to is the needless waste of tow in the filling department. Tow makes a very good cleaner for the filler, and when it is properly used and cared for it is quite economical, otherwise it is expensive. After the tow has been used it may be pulled apart when dry and the old filler material be shaken out of it; or pull it apart while it is wet with the filling and let it dry, after which shake out the loose material. The tow thus treated may be used again as a first-cleaner.

I have received some very beautifully finished samples of hard and soft woods from the foreman of a Baltimore finishing-room, and have been given the method of producing the same, some of which follow here. The finisher tells me that he has produced at least five hundred different colors or shades for wood finishing.

**Malachite Green.**—Water stain with aniline green crystals or strong green oil stain; green paint will not answer, not being transparent enough to show the figure of the wood. Next coat with white shellac tinted with green to the proper shade, one or two coats, according to the body required. When quite dry, finish with wax in the usual way.

**Flemish.**—There are many ways of producing this finish. Some stain manufacturers send out a stain that will do the work with one or two coats, and, it being a spirit stain, it dries hard enough to ship in a few hours. The sample sent was treated with a coat of ebony water stain and then oiled with a dark oil stain containing ivory drop black, after which it was given a coat of dark shellac. Finish with wax. By holding the work in a certain light the Flemish green may be more readily be noticed.

**Antwerp Oak.**—Stain with Antwerp stain in oil and apply one coat of shellac, then wax.

**Green Oak.**—Apply golden oak stain first, then when it is dry give a coat of orange shellac tinted with green aniline crystals. Then wax finish.

**Forest Green.**—Make the oil stain as follows: Take one pound of chrome green; half pound chrome yellow, medium shade; three pints of turpentine; one pint raw linseed oil, and a few drops of good white japan. Stain the wood with this, then apply a coat of orange shellac, colored with turmeric and a few crystals of green aniline; then finish with wax.

**Weathered Oak.**—There are many shades and many ways of making weathered oak. The sample furnished was finished with a chemical stain made thus: Take two ounces of dry tannin, same of copperas, and dissolve separately in a quart of water, then mix them together. This will give the natural weathered oak color with the bluish slate cast. It should then be oiled and shellacked, then waxed. A very good weathered oak stain may be made with a mixture of lampblack and lemon yellow chrome, using very little of the chrome. Or stain with copperas and bluestone in solution, then oil stain it, using a stain with a little burnt umber in it. Then shellac and wax.

**Primrose Oak.**—This is same as green oak, except that the yellow cast is more pronounced in primrose. Use no green in the shellac, but add instead a few grains of aurimine yellow.

**Marine Oak.**—The peculiar effect shown in this specimen was produced as the result of the accidental spilling

of a bottle of Carter's writing fluid on some raw oak wood; noticing the effect, he applied the ink to a slat of oak, and after it had dried he applied a light copperas solution; next gave it a coat of black shellac, then waxed it. The shellac was made black with nigrosine.

**Bog Oak.**—This effect is obtained by the use of the regular bog oak stain, coated with orange shellac and waxed.

**Gray Weathered Oak.**—This can be obtained by the use of the regular commercial weathered oak stain, shellacked and waxed.

**Royal Oak.**—This is a fumed oak effect obtained by the use of a stain composed of ammonia, bichromate of potash and Vandyke brown.

**Fumed Brown Oak.**—This effect is obtained with the same stain as indicated for royal oak, only making the stain stronger. Then oil, shellac and wax.

**Mottled Oak.**—This color it whatever one may choose to call it. It is something entirely new, and I doubt if many finishers would know how to produce it. It is something that one does not get up against every day. I quote the finisher's words. The wood is first treated to a strong copperas stain, which is allowed to dry hard, then fill with a good shade of antique filler. After the filler has been wiped off, make a medium strength solution of oxalic acid, dip a sponge in this, wring out the sponge and dab over the filled surface of the wood carelessly, until you have mottled the same to your satisfaction. If the wood is much quartered, take the tip of the sponge and mottle the flakes separately; allow this to dry perfectly, then dust off the acid crystals that have formed. When quite dry and dusted off, apply a light coat of stain, then shellac and wax, or shellac and two coats of varnish, after which rub and polish.

There are many colors that may be employed in staining oak, since the advent of aniline dyes particularly, so that as I have said in the beginning of this article, the finisher may effect 500 at least; the writer has seen at least 200 shades or colors on oak alone, some of which are very beautiful, the crimson or ox blood, for example. However, there is no great demand for so many colors, and where some of the most beautiful ones are used it is in the case of special pieces of furniture. Nobody would probably care for a set of furniture done in ox blood or vivid crimson stain, and yet a chair or other single piece would look very fine thus decorated.

If asked whether wood stains derived from vegetable sources make upon the whole more satisfactory stains than those derived from coal-tar products, I should not hesitate to say that they do. And yet wood stains derived from vegetable sources have a weak point in their liability to fade on exposure to sunlight, just as the aniline stains do, though not in every case in the same proportion. It will be interesting in this connection to have a few formulæ for making stains from vegetable sources.

**Mahogany.**—Stain with a 10 per cent. solution of dragon's blood in alcohol. Don't brush this stain on to the wood, use a soft cloth.

**Mahogany.**—Madder root, 500 parts; yellow wood, 250 parts; boil an hour in 2,500 parts water. Let it be noted here that stains containing turmeric are unsatisfactory, this coloring matter being exceedingly fugitive.

**Leather Red Stain.**—Red Brazil wood, 250 parts; vinegar, 1,000 parts; soak for eight days; then dissolve 30 parts of alum in 250 parts of water and pour the wood extract into this.