

# **Period Furniture Finishes**

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## Introduction

This paper is not intended to enable you to instantly identify the different styles of period furniture. It is written to help you identify the type of finish on a piece, and to help determine the best method to use when cleaning or restoring the existing finish.

In smoke damage restoration work, we often come in contact with very valuable pieces of old furniture. If we can clean and restore an original finish the value of the piece will be retained.

I have had an interest in various antiques for a number of years, and have restored some pieces and completely refinished others. I have read a number of books on refinishing and restoring furniture. In the last five years working for Dow Columbia Inc., one year in their restoration department, and four years as an estimator, I have had a chance to enlarge on my knowledge. I hope this paper will be of some help to you, or maybe at least give you incentive to search for more information and thereby gain knowledge.

## Furniture Styles And Dates

This will not be a complete guide to furniture styles and periods, only an outline to guide you in determining the finish on a piece.

Legally, an antique is a piece that is more than one hundred years old. In practice, an antique is considered to be anything that has acquired unusual value due to it's beauty and scarcity and because of it's age, often as little as fifty years.

Period dates are approximations since designs change slowly and some pieces were still made after new styles became popular.

Periods in order;

### France

Louis XIV 1643 - 1715

Louis XV 1715 - 1774

Louis XVI 1774 - 1793

French Provençal 1730 - 1810

French Empire 1804 - 1815

### England

Tudor 1485 - 1585

Elizabethan 1558 - 1603

Jacobean 1603 - 1689

William and Mary 1689 - 1702

Queen Anne 1702 - 1742

Georgian 1702 - 1749

in anything. It can be destroyed by paint remover, but can not be softened and rebrushed. It is tougher than lacquer or shellac. If pressed with a fingernail, you can marr it, but it won't crack the way shellac or lacquer will. It's oil content makes it more pliable.

Oil finish is applied to a piece stained, but not sealed. The oil must be boiled linseed oil, as raw linseed oil never dries. Boiled linseed oil is thinned to three parts oil to one part mineral spirits. This is applied very liberally with a brush or soft cloth to the entire piece. Then it is left to stand for several weeks, with ckecking every day and applying more oil to any areas that are drying. This process continues for an unpredictable length of time. This depends on the type and dryness of the wood, and of the air temperature. When wood appears to be taking no more oil, the surface is wiped off as dry as possible with a soft cloth, and is allowed to dry for three or four weeks. Then after three or four weeks of drying, wipe on another thin film of trinned oil and allow to dry again for another three or four weeks. This process is continued, oil, dry, oil, dry, for at least four or five months. If at any time the slightest stickiness is found, the piece should be allowed to dry longer. Because of the time involved, only the finest antiques are worthy of this process. Only about three percent of the finishes you find will be true linseed oil finish.

Penetrating sealer finish is easily identified. It has no buildup look, and no thickness. The wood still shows grain, but the surface has been hardened. and protected by a sealer that has penetrated the wood fibers. This is widely used by people who buy unfinished furniture because it is an easy one coat, wipe on application.

With a waxed finish, the wood has only been waxed, though sometimes it is stained first. This has the same look as a sealer finish, but is not as hard a finish. This is the simplest finishing job, and can appear on a piece of any age or value.

There is no true test to determine oil, wax, or sealer finishes such as there are for shellac, lacquer, and varnish finishes. You will have to rely on descriptions and your own experience to determine these types.

United States

Colonial	1630 - 1725
Shaker	1760 - 1800
Chippendale	1749 - 1779
Adam	1758 - 1792
Hepplewhite	1750 - 1790
Sheraton	1790 - 1810
Duncanphyfe	1800 - 1815

Current styles - still being made:

Early American

Scandinavian

Oriental

Shaker Modern

Ranch Style

Reproductions of all the above antique styles

The style or period of a piece may indicate the age, but not necessarily the type of finish; it may not be the original finish, or the piece may be a well done reproduction.

There are some other clues to look for when determining the age of a piece.

Wooden pegs are often found in old furniture. They were used before metal fasteners were made, but this is not an indication of age, as they were often used later instead of nails or screws for more solid and long lasting construction.

Nails in a piece can be an indication of age. Modern machine made nails date from about 1875. Cut nails were first made around 1800. Prior to 1800 all nails were hand forged, generally square, and tapered to a point.

Screws were first made in approximately 1600. They had hand filed threads and handsawed slots in the top. The modern machine made screws were introduced about 1850.

Before 1850 only the exposed surface was finished. The back boards, the inner surfaces, and the underneath surfaces were left unfinished. The marks made by chisel, handplane, and straight saw are often visible on these unfinished surfaces. After 1850 saw marks tend to be curved, as they were made by rotary saw blades. The year 1850 also marks the dividing line between slow lathes and modern fast ones. The old ones often left tool marks on turned parts. The turned parts also tend to be irregular, since matching dimensions were gauged by the eye.

If you can date the piece and it still has the original finish, it will help you to determine the type of finish used.

All clear finishes were shellac up to the beginning of the Victorian period (about 1850), as lacquer and varnish had not been invented yet. Varnish was developed about 1850, and lacquer was developed about 1900.

## Damage To Furniture Finishes

When you first walk into a badly fire damaged home with expensive furniture, the homeowner may feel the furniture is beyond repair. There may be only heavy smoke damage with accompanying moisture or water damage. After preliminary inspection, we need to reassure the client that we can indeed clean and restore their prize possessions, if this is the case. In some cases the finish can be restored only if enough of the original finish remains. In cases of severe damage the piece may have to be completely refinished to save the piece.

The types of damage you may expect to find in this situation is heavy accumulation of smoke and soot with no damage to the actual finish. This will require only expert cleaning. In more severe cases the finish may be damaged with heat crazing, blushing (white spots or clouds), or very minor blistering. In these cases the finish can be restored. In the most severe cases, where the finish is actually bubbled and blistered and some charring has occurred, the only solution to save the piece is refinishing.



## Identify The Finish

Clear finish test; this should be done on an inconspicuous spot, such as the inside top of a table leg, or bottom edge of a drawer front, etc. Moisten a small spot with denatured alcohol. If the finish softens it is shellac. If the finish does not soften, moisten another spot with lacquer thinner. If this softens the finish it is lacquer. If neither spot is affected, the finish is varnish.

A good oil finish is easy to identify. It is the most beautiful of finishes, and has depth and beauty that can only be approached with other types of finishes. It is a long, time consuming process, and only used on finer pieces.

Clear finishes are classified as soft, hard, or oil.

Shellac is a clear finish of medium hardness. It is somewhat thicker than varnish, and used to build up depth or body to a finish. It is neither water nor alcohol proof. It reacts quickly to water or moisture by turning cloudy or white.

Lacquer is a clear finish similar to shellac. This finish was invented to use on production lines, as it dries almost immediately. It is applied with a spray gun. It also can be damaged by moisture.

Varnish is the hardest clear finish. It is waterproof and alcohol proof. It is applied satisfactorily with a brush, rather than by spraying, and takes about twelve hours to dry. This is why it is seldom if ever found on mass produced furniture. Once it has dried it will not redissolve

## Inspection For Damage

The first requirement before any estimate on restoration can be given, is to inspect carefully for extent of damage to the piece. This could include loosened joints from moisture and heat as well as damage to the finish. Sometimes the haste necessary in putting out a fire causes damage such as nicks and scratches due to rough handling.

Surface damages to look for in the finish, are cracking or crazing, caused by heat drying out the finish. White spots or clouds caused by moisture getting under or inbetween the layers of finish, causing it to delaminate. This finish will be shellac or lacquer, since moisture does not affect varnish. Usually white spots or general cloudy appearance does not penetrate deeply into the finish. In these cases it can be restored. Chipping is when a small piece of the finish flakes off, usually the result of a blow, and the wood underneath is not damaged.

If during inspection any structure damage is noted, these repairs should be made before any finish restoration is started.

## Cleaning

Thorough cleaning is essential. Proper cleaning removes dirt, wax and polish without harming the finish. A clean cloth is moistened with mineral spirits (paint thinner), and rubbed briskly on the surface to be cleaned. In cases of heavy accumulation it may be necessary to repeat this operation several times, changing cloths frequently. Keep cleaning until the cloth is no longer discolored by dirt and wax.

A linseed oil finish should be cleaned with turpentine and a soft cloth. Then wash with soap and water.

Caution- paint thinner will not harm any normal finish, but sometimes abnormal finishes of individual concoctions were used. Always test first on a small inconspicuous spot.

After a thorough cleaning the only other restoration required may be to apply a new coat of the existing finish or just wax or polish.

## Restoring The Finish

Restore - to clean, repair, and return the old finish to its original condition.

We are not talking about refinishing, which means removing the old finish and replacing it with a new finish. We are going to restore the original finish.

When the remaining original finish is of such quality and condition that it can be well restored, this should be done in order to maintain the beauty and value of the piece. Failure to do so could result in a financial loss of twenty-five to seventy-five percent of the potential value. If little or none of the original finish remains or if large areas are badly damaged refinishing may be necessary to salvage the piece.

If you are only going to add a new finish coat to the existing finish, proceed as follows:

When the finish is identified and thoroughly cleaned, prepare the surface by rubbing with the grain with 0000 steel wool. Do not try to dig into the surface of the existing finish, but only to abrade the surface. This will allow the new coat to adhere, and will help to smooth out any surface roughness. Follow the steel wool with a damp cloth to remove every particle of dust and steel, then clean the surface again with paint thinner. When the surface is prepared and completely dry, touch up the finish with the same material that was used in the original finish. The simplest method is by spraying with a spray can of lacquer, shellac, or varnish. Restoring

with spray finishes is especially effective when only a portion of a surface is to be covered. It is advisable to apply a final thin coat to the entire surface to equalize appearance, When it is thoroughly dry, rub down gently with 0000 steel wool, always with the grain.

White spots, clouds, or blushing, caused by moisture can sometimes be removed by abrasion. After cleaning, rub the affected area with 0000 steel wool dipped in mineral oil, use a liberal amount of oil and keep the steel wool moistened. You are actually removing the surface of the finish that has whitened and also polishing the clear under surface at the same time. When all the white film is gone, just dust, then wax or polish. If white spots extend throughout the depth of the finish, they may be removed by using the appropriate solvent. A moistened cloth with denatured alcohol for shellac, or lacquer thinner for lacquer, is rubbed lightly over the affected area. This may lift all the finish, but will not harm the wood. The finish that remains may be quite thin. You can then apply a new coat of the existing finish as described above. If water has penetrated the finish there will be dark spots in the wood. The only recourse in this case is to refinish.

Cracking, crazing, and minor blistering of shellac or lacquer finishes may be restored by redissolving the finish in its appropriate solvent, brush it out and let it dry. This process is called reamalgamation.

Restoration of a lacquer finish can be accomplished by dissolving the existing finish in lacquer thinner, letting it smooth out, and reharden. The lacquer thinner penetrates the lacquer, softens and reliquidifies it.

In a few minutes the lacquer thinner evaporates and the lacquer is hard again. Lacquer can be dissolved and dried out over and over again. This can be done to a finish that has blushed, cracked, crazed, or blistered. For small spots or minor areas, wet a small pad of cloth with lacquer thinner, wipe the affected area until the finish softens. Then just let it dry. To give an even appearance all over you may want to spray the entire surface area with a thin coat of lacquer. Lacquer is difficult to apply with a brush and should be applied by spraying.

With larger areas always experiment first in an inconspicuous spot to find out how wet to get the surface, and also how long and how hard to brush or wipe the surface without creating a bare spot. When you are satisfied with the test spot, begin to restore one flat surface at a time. Pour lacquer thinner into a bowl. Use an absolutely clean brush, preferably a new one. Quickly and gently brush the entire surface you are working on with the lacquer thinner. First, brush cross grain then immediately with the grain. Soak the entire surface with the lacquer thinner and brush with a light stroke. When the lacquer has softened all the way through, gradually increase the pressure of your brush until the finish has spread evenly. Don't try to get the surface absolutely perfect, or free of brush marks, ~~many~~ will disappear as the surface dries, and the rest will not be noticable after you have rubbed the completely dried surface with fine steel wool and waxed or polished it. If the restored surface is not even or smooth enough, spray with a fresh coat of lacquer and let it dry thoroughly before waxing. Before beginning the reamalgamation of the lacquer coat, be sure the surface is absolutely

clean and free of wax. The presence of any wax will result in little patches in the finish that will not dry. Work on large flat surfaces only when they are level.

Shellac reamalgamation uses the same process as lacquer, but for this process use denatured alcohol as a solvent. Some shellacs are tougher than others and can be reworked better with a mixture of three parts denatured alcohol to one part lacquer thinner. This is especially true with shellacs of the Victorian period. For shellacs before the Victorian period, denatured alcohol by itself will work. Care must be taken to apply this in a warm, dry room, or the shellac may form an opaque white film as it dries. Both shellac and alcohol will absorb moisture from the air. Therefore it is best to buy them both in small quantities and use a fresh supply each time. Shellac finishes are usually very thin. After restoration of the existing finish, a fresh coat of shellac should be applied.

Unlike shellac and lacquer, varnish cannot be redissolved in any liquid, and therefore is difficult to restore a varnish finish. About the best that can be done is to thoroughly clean, then rewax or polish. Any damage to the finish will have to be taken care of by stripping and re-finishing.

Restoring a linseed oil finish is a long and arduous process. Because of the time involved in giving a piece a linseed oil finish you will seldom see one. If you do have to restore a linseed oil finish remember the process is lengthy, and charges should be necessarily high. Clean the piece first with turpentine, then wash it with soap and water. Rub the surface with steel wool until it has a dry scruffed look. Apply more boiled linseed oil

as described in the description of finishes, until the finish has the desired depth.

A sealer finish may be restored by first cleaning, then being rubbed down with fine steel wool. Always rub with the grain. Brush on a coat of sealer of the same color tone, let set five to ten minutes then wipe off. This will leave a trace of the new sealer on the old finish. Allow this to dry for twenty-four hours, then rub lightly with 0000 steel wool and wax or polish.

Chips in the finish may be repaired before other surface restoration is started. Make sure the surface to be restored is level. Use a fine camel hair brush and fill the hole with quick drying plastic or synthetic varnish. Make sure it wets to the edges of the hole. Wipe off any that overlaps the surface. Let it dry for twenty-four hours in a warm place. Repeat the process until the varnish in the hole is above the surface of the existing finish. This may require three or four applications. Cut down the varnish with fine emery paper wrapped around a block of wood at least three inches by six inches. The surface should be wet with oil. Then gently rub the block over the varnish. When the patch is flush with the surface, wipe off the oil and wax or polish.



Credits

Professional Furniture Refinishing For The Amatuer

By Jessie D. Savage - Harper & Row 1974

Three Centuries Of American Furniture

By Oscar P. Fitzgerald - Prentice Hall 1982

The Furniture Doctor

By George Grotz - Doubleday & Co. 1962