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DOORS AND HARDWARE

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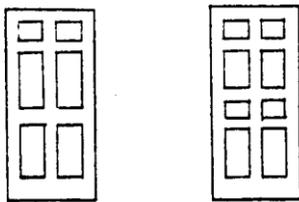
Detecting Original Doors and Hardware

Doors in old buildings are found to have been fairly frequently changed-out or moved to another location in the building (or moved from a different building). A salvaged 1830s door may be found in an 1870s building; a 1930 door may be in an 1820 building. Therefore caution must be used in establishing construction dates based on doors and hardware.

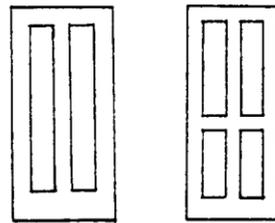
Most frequently changed are entry doors, probably due more to fashion than to wear. Locksets older than about 1850 have apparently survived on less than half the doors from that period. Sometimes an examination of the lock-rail of a door will show evidence of 3 or more different locksets having been on the door. Screw-hole patterns, multiple key-holes or mortise cuts, and paint traces of now-gone rimlock boxes give evidence of removed locksets.

Hinges have less frequently been changed. If the present hinges don't fit the jamb mortise-cuts or if the mortise-cuts have been patched to fit the present hinges, then probably the present hinges are not original.

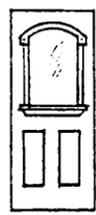
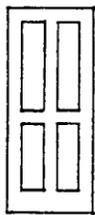
Original doors and hardware will most likely be found in secondary rooms where fashion, with its desire to be up-to-date, did not dictate discarding the original hardware or doors. Examine all the doors in the building, noting differences, similarities, and evidence, and joinery. It must be kept in mind, however, that in all periods it is fairly common to find at least two door-panel arrangements as part of the original construction. Some common panel arrangements are as follows:



Federal, c. 1810-1835 usually very thin, 1 1/8" to 1 1/4", small delicate moulds, height usually 6'-4" to 6'-8" maximum. Frames have a bead-mould next to the opening.

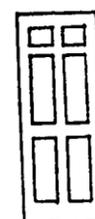
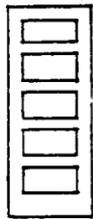


Greek Revival, c. 1830-1860 usually thicker than Federal, usually planar mould profiles of a heavier proportion, usually taller and wider than Federal doors, frequently 7 to 8 feet tall.



Italianate, c. 1850-1880, sometimes have heavy bolection moulds in rounded profiles on both doors and frames.

Eastlake, c. 1880-1900, very elaborate entry doors with heavy machine carving in a variety of patterns.



1900-1930

1920-1950

1950-1980

Federal and Greek Revival Door Construction

The Federal and Greek Revival doors were hand-made and have the following construction characteristics:

1. The boards and panels were smoothed with a jack-plane and not originally sanded. This leaves tell-tale shallow depressions and ridges about 1 to 1 ½ inches on centers, irregularly spaced, caused by the slight convex curve of the jack-plane blade. These can usually be seen in a raking light, and felt by fanning the fingertips across the width of a board.
2. The joinery is by mortise, tenon and peg, as in later 19th Century periods, but these early doors have exposed tenon-ends which can be seen on the door edges. Doors made after the Civil War will more commonly have concealed tenon-ends. Late 19th Century doors will not usually have pegged joints.

Detecting Reproduction Doors

By the above methods a 20th Century reproduction door can usually be distinguished from an 1810-1860 door. Such reproduction doors have been observed. Many early houses were “restored” in the prosperous Colonial Revival period of the early 1900s and contain such doors, windows, mantels, etc. Prior to careful examination, these may at first be thought to be original.

Federal Period Door Characteristics

Federal Period (c. 1810-1835 in Alabama) doors typically were very thin - usually 1 1/8” inches thick - because the rimlocks (“box locks”) mounted on the face of the door almost universally in use then did not require a thick door as does a mortised lock (a lock cut into the stile of the door). Mortised locks were available in the Federal Period but this observer has seen none in Alabama. Federal Period doors have been observed in various thicknesses up to 1 ¾ inches, but anything over 1 ¼ inches is uncommon. Another factor in this thinness was fashion, wherein the Adamesque influence tended to lightness, delicacy, and thinness in all decorative aspects. This delicacy is a good general dating clue for Federal period moulds.

The panel construction in Federal Period doors was usually of two methods: raised panels similar to a modern door or flush panels with bead-mould edges. The panels were typically flat and plain on the “back” side of the door since this side was less in view. A very few examples have been seen which were raised (or beaded) on both faces.

Service doors in the Federal Period were frequently of wide (10-15 inches) beaded-edge vertical T and G boards about 1 1/8 inches thick, scabbed together on the back with 2 or 3 bevel-edged horizontal batten boards. Hinges might be iron straps or cast-iron butts. The jack-plane marks are normally in evidence.

Federal Period Door Frame Characteristics

Frames for Federal Period doors are almost always beaded next to the opening. The facing trim is usually flat, but not always. The outer edge of the facing trim usually will have a delicate Adamesque backband mould, mitered at the corners. Less frequently there will be a bullseye corner block at the facing trim corners. The trim will be installed prior to the plaster so that the trim is, in effect, recessed into the plaster depth. This is also true of other Federal Period trim. This characteristic is a good dating clue for early 19th Century work.

Federal Period Hardware

The most common Federal Period rimlock (“box lock”) is a “Carpenter” brand lock patented by Carpenter and Company of England. These locks can be identified by a small round brass seal bearing the rampant lions of the British royal arms and the words “Carpenter and Company.” The “Carpenter” locks sometimes have the initial of the reigning British monarch stamped in the brass rim of the keeper.

While brass-box rimlocks were available in the Federal and Greek Revival periods, few have been seen in Alabama by this observer. Several examples of brass rimlocks in 1815-1850 houses examined proved to be of early 20th Century manufacture, apparently installed in the Colonial Revival period to gussy-up the house. Indeed, these brass rimlocks are still manufactured but should not be used if historical accuracy is the goal.

The Carpenter lock was still much-used in the Greek Revival period, along with other similar iron-box rimlocks with small brass knobs. A variation of the “Carpenter” type lock is found in some post-1850 locks: the brass seal has an American eagle and has the words “Walker Improved”. The “Carpenter and Company” brand in 1844 became “Carpenter and Tildesley.”

Greek Revival Hardware

In the Greek Revival period, some rimlocks began to be made with brown, black or white ceramic knobs. Sometimes these original 1840-1850 ceramic knobs have been discarded in favor of new brass ones - an error. A careful examination will reveal whether the ceramic knobs are original or are later replacements. If original, they should be retained.

Hardware Repair

If the knobs are loose they can be tightened by reworking the screw holes on the knob shaft. Cleaning and oiling usually takes care of the mechanism.

Lock Sizes

Rimlocks of 1810-1850 are found in a wide variety of sizes. Most common is about 4 ¼ x 5 inches. Some are as much as 6 x 10 inches. The larger size is not an indication of age but of importance. The front door locks are typically the largest.

Reproductive Hardware Sources

Good 19th Century reproduction locks and hinges, etc. are available from “Ball and Ball” at 463 W. Lincoln Hwy., Exton, PA 19341, tel. (215) 363-7330. This company will also reproduce items not found in their catalogue. Obviously this is more expensive and slower than buying some inaccurate off-the-shelf item but it is desirable. Antique hardware can sometimes be found in flea markets and salvage companies. A few skilled individuals will repair or reproduce hardware in an accurate manner. One who has done this is Jim Batson at P.O. Box 726, Huntsville, AL 35804, who made several hundred items for Constitution Hall Park in Huntsville.

1810-1860 Hinges

Prior to the Civil War the most common hinge was a cast iron butt type which generally resembles a modern butt hinge except that they were ingeniously cast as a unit. The pin is cast integrally and cannot be removed. To take down a door, the hinges must be unscrewed. Numbers of these brittle cast-iron hinges have been broken by someone tapping the hinge with a hammer to “loosen the pin.” The metal is, of course, thicker than that of a modern hinge, varying from about 1/8 inch at the edges to 3/16 inch or ¼ inch at the pin.

Dating Hardware

A dating clue for hardware is to remove a screw and look at the point. If the point is blunt the screw was probably made at least prior to the Civil War. A machine for making pointed screws was not invented until the second quarter of the 19th Century.

Greek Revival Doors

Changes in doors and hardware from the Federal to the Greek Revival period were primarily stylistic rather than technical. The Greek Revival buildings, and their components, utilized an appropriately heavier scale and simpler moulding shapes. This is a good general dating clue, not just for doors.

Italianate and Gothic Revival Styles

In the 1850s the Italianate and Gothic Revival styles became popular in Alabama. Rounded shapes (door panels, moulding sections, and windows) in a heavy scale are a hallmark of the Italianate. The pointed arch, trefoils, quatrefoils and other lacy cut-out jigsaw shapes (in heavy scale) and steep roofs were characteristics of the Gothic Revival, which was primarily used in churches during the 1850-1870 period.

This period after 1850 saw more machine-made millwork, much of it imported to Alabama from far away on the growing national rail system. Such tell-tale clues of handmade doors as jack-plane marks became more scarce and quickly disappeared not long after the Civil War.

Hardware became more refined, varied and elaborate as manufacturing methods progressed. Mortised locks were common. Wrought butt hinges as well as the old cast-iron type began to be made. Ceramic knobs were usual. Electro-plated hardware was available. The appearance of the hardware took on an elaborate Victorian flavor, made possible by improved and cheaper manufacturing methods, and made desirable in the Romantic Revival reaction to the preceding staid Greek Revival and Federal Period styles.

Post-Civil War Hardware

After about 1870 virtually all doors and hardware were machine-made and in a bewildering variety. The 1865 “Russell & Irwin Manufacturing Company” catalogue has 160 pages devoted to building hardware. Machines and large factories encouraged frequent changes in both style and mechanism.

Victorian Hardware Sources

Ball and Ball carries a small line of reproduction Victorian hardware. Salvage companies usually have some. A source for antique Victorian hardware is “Lee Valley Tools, Ltd.”, 2860 Queensview Drive, Ottawa, Ontario K2B8.19, tel. (613) 596-0350. Another is “San Francisco Victoriana”, 606 Natoma St., San Francisco, California 94103, tel. (415) 864-5477. There is too much variety and not enough research to accurately date much 1865-1900 hardware. If it’s broken, try to fix it or replace it with an identical item. If this isn’t possible, you have to do the best you can, recognizing that whatever is available may not be correct for the period or style. Since these items are machine-made, a locksmith who could readily reproduce a c. 1820 “Carpenter” lock will be unable to reproduce an elaborate Victorian lock at any practicable cost. Ironically, it is in some ways easier to restore a Federal Period or Greek Revival handmade building than a latter-19th Century one containing many elaborate machine-made items.

Sliding Doors

Large double rolling (“sliding”) parlor doors seem to have become popular in the 1840s and remained so through the early 20th Century. The tracks can usually be repaired. If not, several hardware companies still make them, such as the Wrightsville Hardware Company at Wrightsville, Pa. 17368. Many of these wide doors and wide cased openings have been installed later in buildings which did not originally have them. Look for patches in the floor, dissimilar moulds and the various clues described above.

Door Finishes

Before the Civil War the almost universal finish for doors (both interior and exterior) was to “grain” them with layers of thinned paint in imitation of various woods. The “graining base” of a solid color was used to tint the graining; for example a bright ink was the graining base for “mahogany”, a light beige for “walnut.” There was usually only one thinned graining coat, but sometimes there were 2 or 3, which gives more “depth” to the graining. Artists call this technique “glazing.” Rembrandt was a master of it. The graining was protected by a coat of varnish since the thinned-paint graining was easily nicked.

Later paint can be removed from over graining with the proper skill and care. Exposed but lightly damaged graining should be retained rather than attempting to re-grain it, for the original graining would be lost and the new “graining” would probably range from “not-good” to “awful” (examples abound). Skilled grainers are both rare and expensive.

One technique to minimize the appearance of damaged areas in graining is for an art-sensitive person (not a commercial house painter with a 4-inch brush, the smallest they seem to have) with a tiny brush to paint only the nicks with a harmonizing shade of brownish paint, being careful to not get any paint on the graining. This is the technique art-restorers use in filling in the lost pieces of ancient pottery. There is no attempt to “restore” the damaged areas, you simply make these areas inconspicuous.

Baseboards and other trim elements are also frequently grained or marbled in pre-1860 buildings. The graining or marbling is typically applied over a soft wood such as pine or poplar. The idea was not so much to save money, for this decorative device can be found in mansions (here and in Europe) where hardwoods and even marble could be easily afforded. Graining and marbling was a conversation piece in a period where “fool-the-eye” paintings were also popular.

After the Civil War, doors and other trim were more frequently made of hardwoods with a stain-and-varnish finish. Hinges, knobs and lock-plates frequently had elaborate arabesque embossed designs, and even embossed illustrations of landscapes, people and animals. Electro-plated finished on hardware became more common.

20th Century Hardware

In the early 20th Century, hardware again was simplified in a reaction to Victorian elaboration. Ordinary doors now had mortised locksets of thin, stamped, brass-plated steel, whose plating soon wore off. Most current locksets are a variation on this, with the small lock cylinder now contained in the knob shaft instead of being below the knob.

Restoring or Replicating Historic Doors

Historic doors have frequently been damaged by alteration, neglect, abuse and even by rats. Sometimes the top panels and mid-stile have been sawn out to make a glass-panel door. Doors have been kicked in to gain access to a locked but vacant building, breaking out panels or lock-stiles. The edges of the doors are nicked by the moving of furniture. All these items are repairable and should be repaired rather than resorting to replacement of the door. Furthermore, it is usually cheaper to repair items such as this than to buy an inappropriate new door which probably doesn't quite fit the old frame opening.

Broken panels can be glued back together. Large gouges can be repaired by cutting in and gluing a new rectangular wood block. Small nicks and gouges of 1/16 inch or so should probably be ignored as one of the natural signs of age and use. Door edges rounded about 1/8 inch by wear should likewise be left as is. If a reproduction door must be made, be aware that many door openings will not be square. Every opening must be measured not only in size but for square.

Any good millwork company can accurately reproduce historic moulds and joinery. "Similar" wooden moulds should not be used. Ask for a short sample of each moulding prior to their manufacture to verify the accuracy of the reproduction.

In replicating doors, instructions and drawings for the millwork company must be very explicit. Many assume a door "just like the old one" means only that it is the same size and panel arrangement. Mould profiles, stile and rail widths, panel dimensions and shapes, exposed tenon ends and pegs are all usually overlooked as a part of "just like" unless these items are clearly pointed out. If a number of doors must be repaired or reproduced, get one done first as a sample.

Doors and Hardware References

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