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## ROOFING FOR HISTORIC BUILDINGS

# Wood Shingles

Wood roofing shingles were commonplace in early America not only because of the abundance of timber, but also because of the relative ease with which they could be fabricated and installed. Made from the heartwood of a variety of locally available trees, early shingles were hand split with a mallet and froe and then dressed or smoothed with a draw knife to ensure they would lay flat on the roof. The introduction of water and, then, steam powered saws in the early 19th century

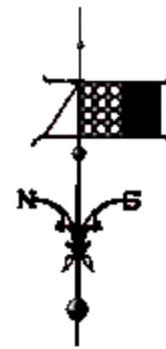
revolutionized the shingle industry by making possible the mass production of uniformly cut and smoothly finished shingles that required no hand dressing. As early as 1802, for example, N. Combes of Lambertton, New Jersey, informed the public that he now had a shingle dressing machine that had been newly invented by 'D[avid] French of Connecticut. This machine at one stroke shaves the Shingle complete; at the second stroke it joints the same, and this done much more complete than it is possible to have it done by hand, in the usual way (*The True American*, Trenton, December 6, 1802). The number of inventions for new types of shingle machines, as well as refinements to existing ones, quickly multiplied as the century advanced; at least nineteen patents were issued in 1857 alone for shingle making machines.

Despite such technological advances, hand split shingles never entirely disappeared. In fact, during most of the 19th century a thriving split shingle industry existed in southern New Jersey. Interestingly, much of the wood used in these shingles came from white cedar logs that had been buried in swamps and then "mined" or raised by shinglers who probed the area for suitable logs. Reportedly a good shingler could tell merely by smell whether a log had been blown down or broken off, the former being the more desirable since it was less likely to be decayed. Once loosened from the peat, the log floated in the water, where it was sawn into blocks and then split into shingles. An expert worker could mine and shave up to 1,000 shingles a week. Besides supplying local markets, South Jersey's mined shingles were shipped to cities and towns up and down the Delaware River, including Philadelphia.

Although wood shingles received strong competition from other roofing materials in the 19th century, they enjoyed renewed popularity in the late 19th and early 20th centuries with the introduction of the various revival styles of architecture. Wooden shingles were steamed and bent to resemble



"The drawing was taken in a swamp which has been worked, for its buried logs, for the fifty years past; and the scattering trees which are seen are only such as have escaped the workman's axe. The levers, spade, and other tools of the shingler are seen, and he is in the act of cutting up the floated log. Several bolts, or blocks in form for splitting into shingles, are lying on the ground in front of him. In the background, a man is seen shaving the shingles. The workmen go over the same ground again and again, and find new logs each time." (From George H. Cook, *Geology of the County of Cape May*, State of New Jersey [Trenton: Printed at the Office of the True American, 1857], 78). [click image for larger view]



## Coatings

To enhance their durability, wood roofing shingles were sometimes given a protective coating. Pine tar, boiled linseed oil, and boiled fish oil (probably whale oil) were all used, often in combination with various pigments for color. The roofs of many famous buildings, including Mount Vernon, the Governor's Palace in Williamsburg, and Independence Hall, Congress Hall, and Carpenters' Hall in Philadelphia were all painted historically. Red and the red-brown shade known as "Spanish brown" were especially popular colors in the 18th and early 19th century. During the Victorian period,



A view of Mount Vernon, c.1792; oil on canvas. Courtesy of the National Gallery of Art, Washington, DC; Gift of Edgar William and Bernice Chrysler Garbish. [click image for larger view]

many painting manuals recommended painting or staining roofs in dark colors. Sherwin Williams, for example, in its 1885 book *House Painting* commented that a roof should not be painted a light color, but some dark color that will strongly contrast with the paint on the main part of the building." In the early 20th century, many

thatched roofs on Tudor Revival homes, laid in evenly spaced overlapping horizontal rows on Colonial Revival houses, and used with abandon on the roofs and sides of Shingle Style buildings. Today, although wood shingles represent a relatively small percentage of the roofing market, they remain a fashionable material for custom houses as well as restoration projects.



The wood shingles on the roof of this Tudor Revival house (left) were steamed and bent to resemble thatching. To aid architects and contractors to lay such special effects shingles properly, manufacturers like the Creo-Dipt Company, Inc. of North Tonawanda, New York, published roof details, like those in the 1923 **Sweet's Architectural Catalogue** (below). (Photograph courtesy of NPS; "Country Cottage Roof".) [click image for larger view]

manufacturers began coating their shingles with creosote oil, tinted in shades of brown, green, red, and gray. Shingles of one color could be laid on a roof to produce a uniform appearance or, for a variegated effect, two or more shades could be combined. Of course, wood shingles could be, and often were, left uncoated. In such instances they would gradually assume what Calvert Vaux described in his 1857 publication *Villas and Cottages* as "a soft, pleasant, neutral tint that harmonizes with any color that may be used in the building."

