

SECRETS OF THE 19th CENTURY LEATHER TANNERY

By David Jarnagin and Ken R

Knopp

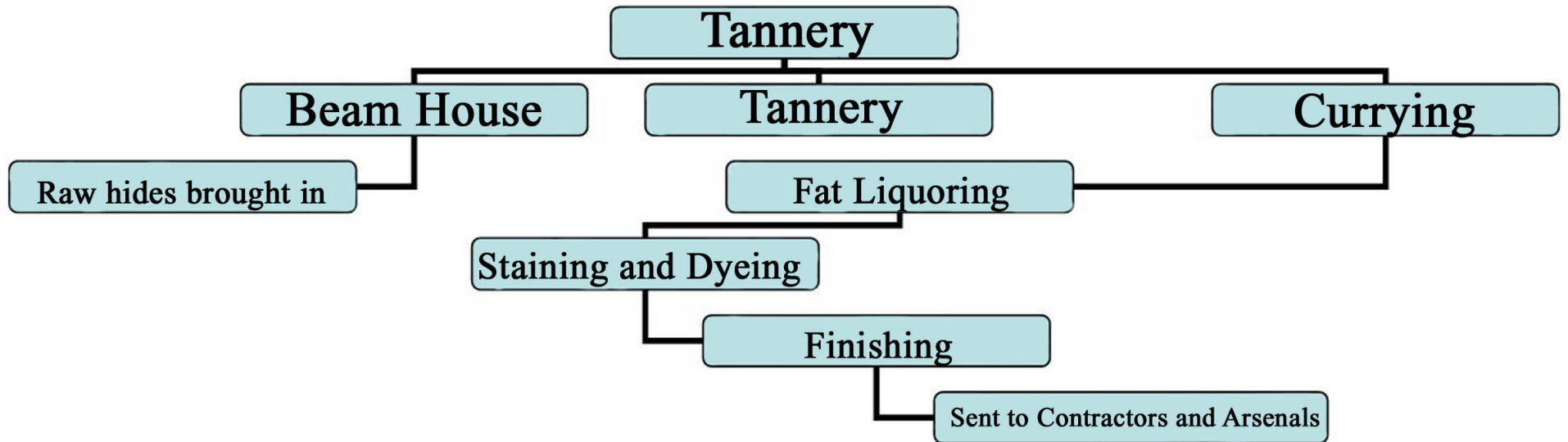
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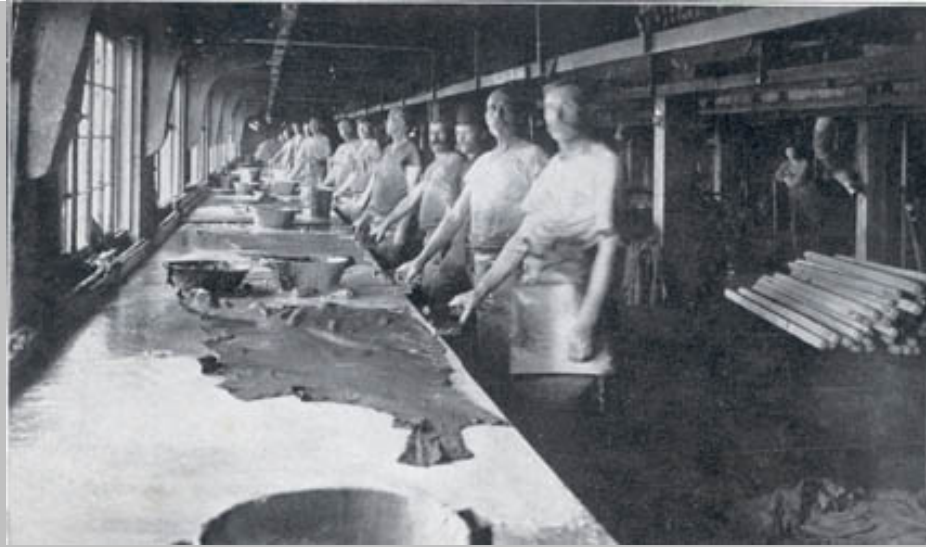
Most historians, collectors and reenactors are aware that mid-19th century Federal military regulations required leather equipment and accouterments to be dyed black in color. But why? And, just how was it done? Moreover, if black was the finish color of regulation then why do surviving war time accouterments display a wide variety of colors from black to chocolate brown; as well as, patchy discoloration? How did that happen? One might naturally fault military leather contractors, inadequate dyes or possibly the effects of time on these artifacts. However, the answer to all of these questions is more interesting, complex and often cloaked in the privilege of ancient artistic secrecy.

As a matter of procedure, the “Bridle leather” (smooth out) leather used in making cartridge boxes, cap pouches, belts, bayonet scabbards and horse equipment was provided both to the Government and to private accoutrement providers by contract tanneries. Mid-19th century tanneries were expansive operations usually found along a creek or river and employing dozens of workers. An intricate, laborious, multi-step process of approximately six months was required to fully tan the hides into leather, before dyeing. This was achieved by repeat soakings of the raw animal hide in solutions made of the bark from trees mixed with other natural and chemical ingredients which generated an acidic chemical reaction that slowly turns the hides into leather.

Most of this article address the last part of the currying process before the leather was sent to the Ordnance Department and contractors.



The use of the word, “dye” is a bit misleading too. the process of coloring leather black, in actuality, is a chemical reaction between iron mordants, logwood and the tanning agent used in leather during the tanning process. Iron mordants are particles of iron often mixed with mild acids such as vinegar. Logwood is vegetable matter that acts as a natural dyeing agent to get the blue black iron mordants to turn a deep, rich black. Tanning agents are residues, also from plants, essential in the process to preserve hides into leather. As noted above, for most military usage leather this tanning agent was usually the bark from oak trees. Careful and often secretive preparation of the leather at the tannery including the right balance of the above ingredients, will determine the quality of both the leather, the black color and how long each will last.



Couriers (Tannery workers) . Work in a 19th century tannery was tough, dirty business. Note the working conditions including having to work close to windows for the natural light they afforded and the inherent filth of the tanning process visible on the workers aprons.

Picture one



Picture #1:

The cartridge box above is typical of “sleeked leather” finishes of the 1860’s. A good shine, even after one hundred and forty years is evidence the tanner did his job well.

Picture 2



Picture #2

This cap pouch pocket was formed out of dyed “sleeked” leather. In spite of being wet and molded in to shape the finish of sleeked leather maintains a good shine.

Picture 3



Picture#3

Photos of two 1864 dated Watertown Arsenal cartridge boxes side by side. The box on the left is Chestnut Oak tanned and still retains its dark black dye finish. The one on right is Hemlock tanned that has turned its signature brown. Fading on Hemlock leather will result regardless of the finish applied to the leather.



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