

# UNITED STATES PATENT OFFICE.

EZRA W. AVERY, OF PLYMOUTH, NEW HAMPSHIRE, ASSIGNOR OF ONE-HALF  
HIS RIGHT TO MANSON S. BROWN, OF SAME PLACE.

## IMPROVEMENT IN TANNING DEER-SKINS.

Specification forming part of Letters Patent No. **217,042**, dated July 1, 1879; application filed  
July 30, 1878.

*To all whom it may concern:*

Be it known that I, EZRA WILMOTH AVERY, of Plymouth, in the county of Grafton and State of New Hampshire, have invented an Improved Process of Tanning Deer-Skins; and I do hereby declare that the following is a full and exact description thereof.

The special purpose of my invention is to tan deer-skins or buckskins into leather for gloves, which shall possess the superior qualities of a greater resistance to water, greater pliability after having been wet, greater warmth, strength, and firmness, and greater clearness, uniformity, and permanence of color.

The usual method of dressing deer-skins for gloves comprises substantially the following successive steps: First, the skins are put in strong lime-water until the hair will readily come off; the hair removed; then they are again put in a strong solution of lime-water until the grain will come off; the grain removed; then they are milled with oil in a fulling-mill until thoroughly dressed; then hung up to dry; and then they are worked in a cleansing-mill in a weak alkaline solution of potash and soda-ash, but sufficiently strong to remove the oil; and then washed with water.

After subjecting the skins to the above process, instead of finishing them at once, as usual, I put the skins into a strong liquor of sumac, white-oak or hemlock bark, and keep them therein until the leather becomes as firm and fine as desired. The time required will depend on the thickness of the skins and

strength of the tanning solution—say, from twenty to fifty days. With skins of medium thickness and a bark solution of full strength the average time will be about forty days.

After the skins are removed from the tan-liquor they are hung up and dried. I then put them in what I term a "fat liquor," which is made as follows: Take of potash, soda-ash, and fish-oil equal parts, by weight; add one quart of this mixture to six gallons of water; use as much of the liquor as is necessary to immerse the skins; let them stay in the liquor about forty-eight hours. After the skins are taken from this liquor dry them, and then finish them over an emery-wheel in the usual way.

What I claim as my invention, and desire to secure by Letters Patent, is—

In the process of tanning deer-skins for glove-leather, after the grain of the skins has been removed and they have been dressed with oil, dried, cleansed with a weak alkaline solution, and washed with water, subjecting them to a strong tan-liquor for a sufficient time, as set forth, then treating them in a fat liquor, substantially as specified, and finally drying and finishing them, substantially as and for the purpose herein described.

Specification signed by me this 13th day of July, 1878.

EZRA WILMOTH AVERY.

Witnesses:

SETH DOTON,  
ANNIE GUILFORD.