

# UNITED STATES PATENT OFFICE.

JOHN JAY JOHNSON, OF KALAMAZOO, MICHIGAN.

## IMPROVED TANNING PROCESS.

Specification forming part of Letters Patent No. 34,688, dated March 18, 1862.

*To all whom it may concern:*

Be it known that I, JOHN JAY JOHNSON, near Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented a new and improved process for tanning and coloring skins with or without the wool, hair, or fur on them; and I do hereby declare that the following is a full and exact description thereof.

The advantage of my improvement in tanning and coloring hides is that it requires no preparation before or after tanning, (for light hides,) and saves three-fourths of the time, three-fourths of the expense, and three-fourths of the labor, making stronger leather than can be made by the old and slow process of tanning. I call my process the "Excelsior Tanning Process."

To enable others skilled in the art to use my invention, I will proceed to describe it and the operation connected with it.

When I tan light hides with the wool, fur, or hair on them—such as sheep, fox, coon, or mink skins, &c.—I first soak, flesh, and clean them in the usual manner. I then make a solution in the following proportions: To one-half bushel wheat-bran add six gallons of soft hot water, and let it stand in a warm room. Agitate until it ferments. Then strain out the liquor and dissolve therein four pounds chloride of sodium, or common salt. Then add one and a half pound sulphuric acid or oil of vitriol while agitating it to make the whole blend together. This solution or liquor will give no color of itself, but may act as a mordant for setting a variety of colors, which are cheap and more durable than if made in the usual manner of sponging colors after tanning. Light hides require to be handled from one to two hours. Then rinse and hang out to dry in the shade. When nearly dry oil or stuff them, as herein-after described. Then let them dry.

For hides that require the hair or wool taken off, I make a liquor as follows: To ten gallons

of soft water add one-fourth bushel slaked lime, also one-fourth bushel wood-ashes. Handle twice each day until the hair comes off. This process absorbs the grease and raises the hide, which gives the tan-liquor free circulation, causing quicker work, and consequently stronger leather. Then I make a bate as follows: To ten gallons soft water add one-half bushel bran-liquor, as above stated, and one-half pound of oil of vitriol. Bate from one to two days. Agitate the pool twice each day. Then work out the hides over the beam. Then put them in the liquor, as described above, adding, if a shade is required, two pounds dissolved japonica. Handle twice each day until tanned. The time required is from two to four days.

I use for stuffing light or heavy hides, first, fish-oil and alcohol, one-third alcohol to two-thirds oil. Then thicken with flour-paste—such as is used for papering rooms—and melted tallow, equal parts. To make the above waterproof add india-rubber or beeswax.

I do not claim the ingredients named in this process for tanning and tawing in any proportion, combination, or order substantially different from those above described, as I am aware that most or all of them have been employed in various ways in different processes of tanning and tawing; but

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

The employment of the liquor compounded of fermented bran, water, common salt, and sulphuric acid, substantially in the proportions and manner specified, and its combination with the solution of lime and wood-ashes in water, and with the stuffing of fish-oil, alcohol, flour-paste, and tallow, substantially in the proportions and manner herein set forth.

JOHN JAY JOHNSON.

Witnesses:

JOHN B. CHRISTIAN,  
DAVID BICKER.