

# UNITED STATES PATENT OFFICE.

PHILANDER DANIELS, OF LE ROY, NEW YORK, ASSIGNOR TO CLARK DANIELS, OF SAME PLACE.

## IMPROVEMENT IN TANNING.

Specification forming part of Letters Patent No. 27,088, dated February 7, 1860.

*To all whom it may concern:*

Be it known that I, PHILANDER DANIELS, of Le Roy, in the county of Genesee and State of New York, have invented a new and Improved Process of Tanning; and I do hereby declare that the following is a full and exact description thereof.

I first prepare a bath of the liquor of terra-japonica, the solution being of sufficient strength to indicate ten degrees ( $10^{\circ}$ ) by the barkometer. Having thirty sides of harness-leather in readiness, suitably prepared by depilating in the ordinary manner, I add to the solution for this number of hides half a pound of tartaric acid and stir it till thoroughly incorporated. The hides are then immersed and kept in motion or "handled" four or five times the first day until well colored. The second day I take a vessel containing a small quantity of the tanning-solution (half a pailful being convenient for the purpose) and dissolve one-half ( $\frac{1}{2}$ ) pound of sal-soda in it. I then take one-fourth ( $\frac{1}{4}$ ) of a pound of tartaric acid and throw into the same, stirring it until effervescence commences, when I pour it into the vat containing the tanning-liquor. This has the effect to "plump" the leather, or give it body and to fix the tannin, and should be repeated as often as the leather requires it—that is, until the hides have acquired sufficient thickness and weight, which an experienced tanner will readily determine. It will ordinarily require to be added two or three times a week; but the time will necessarily be varied by the kind of hides and the weight of leather it is designed to produce. While undergoing this process the leather should be handled two or three times a day. During the last week of the tanning one-fourth ( $\frac{1}{4}$ ) of a pound of bichromate of potash should be

added to the solution, which has the effect to soften the leather and to give it a good color.

A quantity of the japonica solution should be kept in readiness in another vat to strengthen the liquor first used. It should be made as strong as possible—a saturated solution—and one pound of alum should be added to every two hundred and fifty (250) pounds of terra-japonica, which will clarify the gum. This solution should be occasionally added to the first to strengthen it until it indicates fifteen ( $15^{\circ}$ ) degrees by the barkometer, at which point it should be kept until the leather is tanned. The leather is then finished in the ordinary manner, and will be found to possess in a great degree the qualities of weight, pliability, and durability, while the process is materially shorter than the ordinary methods, and, from its simplicity, much less expensive. The ingredients named will operate equally well with bark or any other product which contains the necessary quantity of tannin acid. The time of the immersion of the hides in the solution varies according to the kind and weight thereof, as in all other processes of tanning.

I do not claim merely the use of the ingredients herein mentioned, as I am aware that they have been used in other and different processes; but

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

My improved process of tanning, consisting in combining with the tanning-solution tartaric acid, sal-soda, and bicarbonate of potash, substantially in the order, proportion, and manner herein specified.

PHILANDER DANIELS.

Witnesses:

S. J. ALLIS,  
CLARK DANIELS.