

UNITED STATES PATENT OFFICE.

JABES A. HAMRICK, OF HOT SPRINGS, ARKANSAS.

PROCESS OF TANNING LEATHER.

989,252.

Specification of Letters Patent.

Patented Apr. 11, 1911.

No Drawing.

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To all whom it may concern:

Be it known that I, JABES A. HAMRICK, a citizen of the United States, residing at Hot Springs, in the county of Garland and State of Arkansas, have invented certain new and useful Improvements in Processes of Tanning Leathers, of which the following is a specification.

The object of this invention is to so tan leather that it shall be extremely durable and water-proof, and the invention consists in first subjecting the leather while it is being submitted to the action of the tanning agent to the action of fluid extract of alder bark, thus opening the pores of leather and permitting the tanning agent to strike in, and then subjecting the leather to the action of a fluid extract of persimmon and black haw, thus closing up the pores and making the leather water-proof and extremely durable.

In carrying out my process, the dry hides are subjected to the usual depilating process, and to this end are soaked in water until they are sufficiently softened. The flesh and loose hairs are then removed. The hides are then placed, as usual, in a vat and subjected to the action of lime water until the hair slips easily. During this time, the hides are aired three or four times a day, and the hair removed with a dull worker or draw knife. When the hair is all removed, the hides are placed in clear running water or in a tub in which the water is changed three or four times a day. Twenty-four to forty-eight hours are usually necessary to remove the lime from the hide.

My invention particularly relates to that step in the process of tanning, wherein the hide is subjected to a tanning agent, as for instance, gambier. The gambier is dissolved in hot water and strained into a tub or vat, and sufficient water added to cover the hides to be treated. When the ooze thus formed becomes cool, the hides are placed in the vat, wherein they remain until thoroughly colored, the hides being aired continuously during this operation. When thoroughly colored, fluid extract of alder is added to the ooze, and the hides are allowed to remain in the ooze from two to ten days, according to size. The hides are then taken out, the liquid in the vat heated and fluid extract of persimmon and fluid extract of black haw are added. The hides are then again placed in the vat and left therein from one to five

days, according to the size of the hides. When the hides are tanned, they are taken out, all pelt is removed, and the hides set out for the removal of wrinkles and for stretching. Both sides of the hide are then oiled with fish oil rubbed in thoroughly. The hides are then rolled up and laid away until half dry. They are then worked until dry and then finished.

In order to prepare the fluid extract of alder, above referred to, I take the alder roots, wash them, boil them down and strain. The liquid strained off therefrom is again boiled until the ooze so formed becomes thick. It is then in condition for use, and to each pint of ooze I add a gallon of wood alcohol and thoroughly mix. The fluid extract of persimmon and blackhaw are both prepared in precisely the same manner above described for the alder extract.

For tanning calf, goat and sheep skin, and all hides of about the same size, I use to every two or three pounds of gambier, one-quarter ounce of fluid extract of alder, one-quarter ounce of fluid extract of persimmon, and one-quarter ounce of fluid extract of black haw, using three to four gallons of water for the ooze. The hides remain in the ooze for from three to five days. For one- and two-year old hides, I use to every five or six pounds of gambier, one-half ounce of fluid extract of alder, one-half ounce of fluid extract of persimmon, and two ounces of fluid extract of black haw, with six gallons of water for the ooze, the hides to remain in the ooze for from five to eight days. For cow, ox or bull hides, to every seven to nine pounds of gambier, I use one ounce of fluid extract of alder, one ounce of fluid extract of persimmon, and one ounce of fluid extract of black haw, with seven gallons of water for the ooze, the hides to remain in the ooze for from ten to fifteen days, according to their thickness.

To tan sole leather, the leather is to remain in the ooze, described in the last paragraph, from twelve to fifteen days, leaving on all pelt, however, setting out, and oiling on the grain side with fish oil. The hide is dried when it is finished.

The amounts given above are sufficient for one hide of calf, goat and sheep skin, and for one cow, ox or bull hide, and for one hide to be turned into sole-leather. For each extra hide one-half the amounts of the ingredients above given is added to the ooze. The ooze

will work until its strength is exhausted. I find in practice that it cannot be made so strong as to injure the fiber of the leather.

I find in practice that my invention results in leather of high degree of durability and exceedingly water-proof, yet with all the flexibility which is necessary to the best grades of leather.

Having thus described the invention, what I claim is:—

1. The process of treating leather, which consists in subjecting the leather to a tanning solution, until the leather is thoroughly colored, then adding to the solution fluid extract of alder, then heating said solution and adding thereto fluid extract of persimmon.

2. The process of treating leather which consists in subjecting the leather to a tanning solution, then subjecting the leather to an action of fluid extract of alder, and then subjecting the leather to the action of fluid extract of persimmon and fluid extract of blackhaw.

3. The process of treating leather which consists in subjecting the leather to a liquid tanning agent, then adding to the tanning agent a solution of fluid extract of alder, subjecting the leather to the action of these combined agents and then adding thereto fluid extract of persimmon and fluid extract of blackhaw.

4. The process of treating leather, consisting in subjecting the leather to a solution of gambier until the leather is thoroughly colored, then adding to the solution fluid extract of alder, then heating said solution and adding thereto fluid extract of persimmon and fluid extract of black haw, and then removing the leather when tanned.

5. The process of treating leather, consisting in subjecting the leather to a liquid

tanning solution consisting of gambier dissolved in hot water, then adding to said solution fluid extract of alder, letting the leather remain in the said solution from two to ten days, then removing the leather, heating the solution, and adding thereto fluid extract of persimmon and fluid extract of black haw, replacing said leather and letting the leather remain in said solution from one to five days, and then removing the leather.

6. The process of treating leather, consisting in subjecting the leather to an ooze formed of gambier dissolved in hot water, until the leather is thoroughly colored, then adding thereto fluid extract of alder, letting the leather remain in said solution from two to ten days, then removing the leather, heating the solution, and adding thereto fluid extract of persimmon and fluid extract of black haw, replacing the leather in the solution until tanned, removing the leather and setting out the leather, and oiling.

7. The process of treating leather, consisting in soaping the dry hides until soft, removing the hides to a vat having therein sufficient lime water to cover the hides, removing the hides from the vat, and dehairing the same, thoroughly washing the hides to remove the lime therefrom, placing the hides in an ooze composed of gambier and water, then adding fluid extract of alder to said ooze, then heating the ooze, and adding thereto fluid extract of persimmon and fluid extract of black haw, and letting the hides remain in said ooze until thoroughly tanned.

In testimony whereof I affix my signature in presence of two witnesses.

JABES A. HAMRICK. [L. s.]

Witnesses:

W. H. YOUNG,
CHESTER S. ROUSE.