

UNITED STATES PATENT OFFICE.

JOHN M. MULLER, OF NORTH BECKET, MASSACHUSETTS.

IMPROVEMENT IN TANNING.

Specification forming part of Letters Patent No. 50,945, dated November 14, 1865.

To all whom it may concern:

Be it known that I, JOHN M. MULLER, of North Becket, Berkshire county, and State of Massachusetts, have invented a new Process of Tanning Hides; and I do hereby declare that the following is a full, clear, and exact description thereof.

The first part of my invention consists in making a strong ooze, of equal parts of yarrow and black-birch bark or willow-bark, into which liquor the hides are to lie for about ten days, and handled every day. The liquor is again strengthened, and the hides subjected to it for the space of ten days more, at which time the tanning will be complete. For one hundred sides I take one-half of a cord of black-birch bark and a similar quantity of willow-bark, to which is added about five hundred pounds of yarrow. These substances can be leached several times in warm water to obtain the full benefit of the tanning principle in them, which will make the liquor strong enough for ten days' tanning, after which the liquor should be strengthened again by another leaching.

The second part of my invention consists in subjecting stuffed hides to the action of a steam-bath, the steam of which may be generated from a strong solution of an ooze made from the same substances which I employ in the previous process of tanning. The object of this second treatment is to cause a thorough permeation of the leather by the oil or grease which is applied to the leather in the process of stuffing or dubbing. The steam acting upon the stuffed leather will not only strike in the oil, but it will also close up the pores

of the leather, and render it water-proof, and at the same time soft and pliable. The steaming process may be conducted in a tight vessel, of such a capacity as to contain a considerable number of hides, and this treatment will be found very beneficial to leather which has not been previously stuffed for increasing its solidity and durability.

I do not confine my invention to the precise proportions of the ingredients herein mentioned for tanning the hides, nor to the length of time stated for completing the tanning process. I have found the proportions herein stated to work well and to make very good leather; but other proportions may be found to answer equally as well.

With regard to the process of steaming the skins after they have been tanned, I will state that the hides may be tanned in the usual manner, and by any of the known tanning compounds or liquors, and the tanned skins may be stuffed or not previously to subjecting them to the steam.

Having thus described my process of tanning hides, what I claim as new, and desire to secure by Letters Patent, is—

1. A tanning-ooze which is made from the ingredients herein mentioned and combined in about the proportions set forth.
2. Subjecting stuffed or unstuffed skins, after they have been tanned, to the action of steam, substantially as described.

JOHN M. MULLER.

Witnesses:

MARK P. CARTER,
WM. S. HUNTINGTON.