

UNITED STATES PATENT OFFICE.

WILLIAM MACMILLAN, OF PALMERSTON NORTH, NEW ZEALAND.

METHOD OF MAKING LEATHER.

SPECIFICATION forming part of Letters Patent No. 774,260, dated November 8, 1904.

Application filed November 24, 1902. Serial No. 132,662. (No specimens.)

To all whom it may concern:

Be it known that I, WILLIAM MACMILLAN, a subject of the King of Great Britain, residing at Palmerston North, in the Provincial District of Wellington, in the Colony of New Zealand, have invented a new and useful Improved Method of Making Leather, of which the following is a specification.

This invention relates to the art of tanning or to processes for making leather, which by this invention is rendered more durable, of greater strength, and remains more pliable when exposed to the weather than leather produced in the ordinary manner.

Leather made according to this invention if exposed to wet weather and dried again will not lose its pliability or strength.

The hides are deprived of hair by treating them with lime and water in the ordinary manner. They are then fleshed and reduced in the bate, shaved, and cleaned and placed for three or four days, according to the thickness of the hide, in a bath of three gallons of water in a state of fermentation by the addition of one pound of bran to each hide. The hides are then steeped for four days in a solution of sumac, about two pounds of sumac dissolved in three gallons of water being used for each hide. In preparing the solution the sumac is first boiled in a convenient quantity of water and then further water is added to approximate to the proportions above indicated. While under treatment in the solution the hides are turned over twice in every twenty-four hours. The hides when removed from the sumac solution are steeped for three days in a solution of alum and salt, about six pounds of alum and four pounds of salt being used for each hide, the alum and salt being dissolved in sufficient water to cover the hides when placed in the solution. The hides are turned over twice in every twenty-four hours. The hides are taken out of the bath and while still damp are treated by wiping over the surface of the hides with neat's-foot oil, by means of a cloth, in the proportion of half a pint to each hide. They are then thoroughly dried and after-

ward damped, staked by rubbing the hides on a currier's beam with the blunt edge of a fleshing-knife, shaved with a currier's knife in order to make them an even thickness throughout, set out and given a medium stuffing with dubbing, consisting of tallow and fish-oil mixed together into such a consistency that the mixture can be conveniently worked upon the hide. The dubbing being applied to the hides while they are damp, the result is that during the process of drying the oil penetrates the hide and has the effect of rendering it extremely pliable and durable. The hides are then hung up and dried and afterward sleeked off by scraping the dubbing from the surface with a sleeker, cleaned, and grained and are then ready for the market.

Leather which has been tanned in alum and salt becomes very hard after getting wet; but by the employment of sumac in the preliminary stages of tanning in the manner indicated and by applying neat's-foot oil to the hides while they are still damp the oil penetrates the hide during the process of drying and the leather remains very strong and pliable.

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

1. In the art of tanning leather, the steps in a process comprising the steeping of hides in a solution of sumac in water, and subsequently steeping said hides in a solution of alum and salt in water substantially as and in the proportions approximately specified.

2. In a process of tanning steps consisting of steeping the hides in a solution of sumac in water, then steeping them in a solution of alum and salt in water, and then while the hides are still damp applying neat's-foot oil to their surfaces, substantially as specified.

In witness whereof I have hereunto set my hand in presence of two witnesses.

WILLIAM MACMILLAN.

Witnesses:

J. HERBERT HAUKINS,
P. L. SINS.