

UNITED STATES PATENT OFFICE.

MAGNUS J. SÖDERBERG, OF MALMO, SWEDEN.

IMPROVEMENT IN TANNING LEATHER.

Specification forming part of Letters Patent No. **184,114**, dated November 7, 1876; application filed July 13, 1876.

To all whom it may concern :

Be it known that I, MAGNUS J. SÖDERBERG, of Malmo, in the county of Christianstad, and Kingdom of Sweden, have invented certain new and useful Improvements in Methods of Tanning Leather; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in methods for tanning leather, by which I am able to reduce the time usually needed in tanning, as well as preventing the hides from being injured by the lime used for taking the hair off; and my invention consists, first, in soaking the hides in water, as usual, from two to four days, so as to soften them previous to taking the hairs off, which is done by putting the hides in a lime-vat consisting of about four hundred gallons of water, about two bushels of slaked lime, to which is added, for the purpose of quickening the process, about two pounds of oxalic acid, and about two pounds of chloride of soda, in which solution the hides remain from two to three days, and in which they are handled daily.

For the purpose of taking the lime out from the hides, I drench them in a vat containing about four hundred gallons of water, to which is added about ten pounds of chloride of soda, and ten pounds of dissolved sulphur, in which the hides are left about two days. The dissolved sulphur is obtained by boiling ten pounds of sulphur together with about twelve gallons of water and about five pounds of common soda. The object of the chloride of soda is to open the pores of the hides or skins,

so that the sulphur can act upon them quicker for the purpose of entirely removing the lime. The hides and skins are afterward put in a vat and tanned in about four hundred gallons of bark-liquor mixed with about two pounds of alcohol, about two pounds of sulphate of zinc, and about two pounds of wood-acid, in which the tanning takes place, and in which I let the hides remain from thirty to forty days, and the skins from twelve to twenty days.

After the hides and skins are tanned I soften them in about four hundred gallons of bark-liquor, to which is added about fifteen gallons of gas ammoniac, and about two pounds of oxalic acid, in which they remain about forty-eight hours, and are then ready for the curriers.

Having thus fully described my invention, I wish to secure by Letters Patent and claim—

The improved leather-tanning process, as herein described, consisting in first soaking the hides in water, after which they are put in a lime-vat composed of water, slaked lime, oxalic acid, and chloride of soda, for the purpose of taking the hairs off, then drenched in a vat composed of water, chloride of soda, and dissolved sulphur, for the purpose of taking the lime out of the hides, then tanned in a vat containing bark-liquor, alcohol, sulphate of zinc, and wood-acid, and finally softened in a mixture of bark-liquor, gas-ammoniac, and oxalic acid, in the respective quantities and times substantially as set forth and described.

In testimony that I claim the foregoing as my own invention I have affixed my signature in presence of two witnesses.

MAGNUS J. SÖDERBERG.

Witnesses :

ALBAN ANDRÉN,
HENRY CHADBOURNE.