

UNITED STATES PATENT OFFICE.

CHARLES RICHTER, OF DETROIT, MICHIGAN, ASSIGNOR TO NATIONAL LEATHER COMPANY, OF SAME PLACE.

IMPROVEMENT IN PROCESSES FOR TANNING HIDES OR SKINS.

Specification forming part of Letters Patent No. **178,468**, dated June 6, 1876; application filed May 4, 1876.

To all whom it may concern:

Be it known that I, CHARLES RICHTER, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Processes for Tanning Hides and Skins, of which the following is a specification:

My invention relates to an improvement in the quick processes for tanning hides without the use of bark, and is more especially designed as an improvement on the process for which Letters Patent No. 162,140 were issued to George A. Bartenbach and myself on April 20, 1875, having for its object to render the leather softer, more elastic, and pliable than is possible with any other process with either bark or chemicals.

My tan-liquor is made by mixing, in one hundred gallons of water, four pounds of sulphuric acid, fifty pounds of common salt, ten pounds of wheat middlings, and four ounces sugar of lead.

The middlings should be wet up with water twenty-four hours before use to ferment and acidify.

After the hides are unhaired, worked on the beam, and washed clean, soak them for one hour in the above-described tan-liquor, during which time they should be "wheeled," handled, or otherwise stirred up in the liquor, so as to expose every pore to the action of the liquor, after which the leather can be hung up to dry.

Whip-leather requires to be stretched after drying.

Lace-leather requires to be "stuffed" with a mixture of raccoon-oil and glycerine.

Shoe-leather may be tanned with the hair on, and robes with their fur, in which case their skin sides should be rubbed with the following mixture: Water, one gallon; sal-so-

da, two ounces; raccoon-oil, one quart; glycerine, six ounces.

In tanning calf-skins, uppers, and harness-leather, to give them the natural color, soak them in hemlock or oak tan-liquor long enough to give them the color on the surface, after which they may be tanned by soaking them one day in my above described tan-liquor, during which time they should be handled at least three times.

Leather so made will have much more elasticity, toughness, and pliability than leather tanned with bark alone, at a fraction of its cost.

Any pure and clear animal oil may be used in lieu of the raccoon-oil.

What I claim as my invention is—

1. In the process of tanning hides or skins, the tan-liquor, consisting of water, sulphuric acid, common salt, wheat middlings, and sugar of lead, in about the proportions described.

2. In the process of tanning hides or skins, the stuffing compound, consisting of clear pure animal oil and glycerine, substantially as described.

3. In the process of tanning hides or skins, the solution consisting of water, sal-soda, animal oil, and glycerine, when applied to skin sides of hides tanned with the hair on, in about the proportions described.

4. In the manufacture of leather from hides or skins, the application of the tanning solution named, followed by the use of the stuffing compound, composed of the ingredients stated, in about the proportions set forth.

CHARLES RICHTER.

Witnesses:

H. F. EBERTS,
H. S. SPRAGUE.