

UNITED STATES PATENT OFFICE.

JOEL CARTER AND ALANSON C. KEITH, OF JERSEY CITY, NEW JERSEY,
ASSIGNORS OF ONE-HALF THEIR RIGHT TO JAS. L. BALDWIN AND LEVI
DEDERICK, OF SAME PLACE.

IMPROVEMENT IN TANNING.

Specification forming part of Letters Patent No. **136,488**, dated March 4, 1873.

To all whom it may concern:

Be it known that we, JOEL CARTER and ALANSON C. KEITH, both of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Process of Tanning, of which the following is a specification:

In practicing our invention we first prepare a depilating solution composed of the following ingredients in substantially the proportions named: In one barrel (thirty-three gallons) of water dissolve sal soda, carbonate of potash, or common lye, eleven pounds; prussiate of potash, or nitrate of potash, or nitrate of soda, eleven ounces; sugar of lead, eleven ounces; sulphate of iron, eleven ounces; common salt, eleven ounces; lime, twenty-two pounds.

By doubling the quantity of nitrate of potash or soda the prussiate of potash may be omitted, and vice versa. The common salt may be omitted, as its use is not absolutely essential. The lime should be omitted for furs and skins which are to retain their hair after tanning. Lime may be substituted for the sal soda or its equivalent by proportionately increasing its quantity. This is preferable for tanning deer-skins, and other leathers of a similar nature.

The skins are to be immersed in this solution and remain until the hair is easily removed, when they are to be put into a weak solution of lime, to wash out the portion of unhairing-liquor which they have absorbed, after which the lime-water is removed from them by washing in water alone, when they may be unhaired in the usual manner, but with greater ease.

Having been unhaired and cleansed in the ordinary way, they are then put into a tanning solution composed of the following ingredients, in about the proportions named: To one barrel (thirty-three gallons) of water add common salt, twenty-four pounds; sulphuric acid, twelve pounds; spirits of turpentine, one quart; japonica, five pounds; soft soap, three gallons.

If for furs, the japonica should be omitted on account of its discoloring the skin. The soap may be omitted or the quantity may be varied, according to the effect which it is desired to produce on the leather—increasing the quantity making the leather softer, while with less quantity it will be stronger.

After the hides have been in the last-named solution long enough to obtain the color desired, add to the liquor one gallon of extract of bark, either oak or hemlock, as may be desired.

In tanning skins with the hair, wool, or fur on them, especially those of a light color, both the japonica and extract of bark must be omitted.

The skins are partially tanned during the unhairing process, so that they will be tanned in a much shorter time than when unhaired by the old method. The unhairing solution loosens the hair for removal without effecting any decomposition of the grain, obviating the necessity of any bating process to arrest decomposition.

Both the depilating and tanning solutions will preserve without decomposition or becoming offensive, and may be used continuously by being kept to the required strength by the addition of the ingredients from time to time.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. A depilating solution composed of the ingredients set forth, or their equivalents, with or without common salt, in substantially the proportions named.

2. A tanning solution composed of the ingredients, with or without soap, in substantially the proportions herein set forth.

In witness whereof we have hereunto signed our names in the presence of two subscribing witnesses.

JOEL CARTER.
ALANSON C. KEITH.

Witnesses:

JOHN J. BUNDSCHUH,
LEVI DEDERICK.