



JOHN FREDERICK BECHMANN, OF ABBOT'S CORNERS, NEW YORK.

Letters Patent No. 87,325, dated March 2, 1869.

IMPROVED PROCESS OF TANNING.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN FREDERICK BECHMANN, of Abbot's Corners, in the county of Erie, and State of New York, have invented certain new and useful Improvements in the Process of Tanning; and I do hereby declare that the following is a full and exact description thereof.

My invention is for the purpose of shortening the time of tanning, and to keep the hides soft during the process; and consists in the peculiar use of the various ingredients hereinafter mentioned, more especially, however, in the use of oil of vitriol, for the purpose hereinafter fully set forth.

My process is as follows:

The green salted hides are soaked and fleshed in the ordinary manner.

For "sweating" or "unhairing," which is one of the important features in my tanning-process, I take the skins, after they have been "limed" in the usual manner, (about twenty-four hours in strong lime,) and put in warm water, with oil of vitriol and red arsenic.

For example, for one hundred skins I use six pounds oil of vitriol and one pound of red arsenic, with a sufficient quantity of warm water.

By thus "sweating" or "liming," by my method, I gain greatly in time, for one advantage.

The old or ordinary process is to let them (the skins) lie in a lime-bath about fourteen (14) days, which is a detriment to the skins, as the lime is apt to eat up the strength of the leather.

I leave the skins in my bath for only twenty-four hours.

The hot water, oil of vitriol, and red arsenic, open the pores of the skins, without ultimate hurt to the leather, and this is done more effectually and with great saving of time.

After the hides are taken out of my bath, the hair is removed in the usual way, and they are then put into cold water and left about a day.

From there they are again put into warm water, and the lime worked out in the usual manner.

They are then put into tanning-liquor for three (3) days, and receive the usual handling.

My process now again comes into play.

I take the skins, after the last-described operation, and put them into cold water, with oil of vitriol.

As an example, for one hundred skins I use from six to eight pounds of the oil of vitriol.

This is done to change the color and soften the skins.

After they have lain about four (4) or five (5) hours they are taken out, and then put into strong tanning-liquor and "tanned out."

It takes, by this process, but fifteen days to tan a skin thoroughly, while by the usual processes in vogue it occupies not less than two months. Thus a great and important saving of time is secured, which is rather to the advantage than the detriment of the skin.

My process also possesses the important advantages of producing a tougher and stronger leather, and at least one-quarter ($\frac{1}{4}$) more weight is gained.

I know that oil of vitriol or sulphuric acid has been used for what is called "plumping" hides, and also for "liming," but this is not my use in the slightest degree, and I consider that it burns them and destroys the leather.

The object which I fully accomplish is to soften the skins, and thereby aid and shorten the process of tanning, as before fully explained.

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

"Sweating" and tanning leather by the process herein described, viz, first, using oil of vitriol, in combination with red arsenic and warm water, for sweating, and subsequently using oil of vitriol, combined with water, for tanning, as herein specified.

I witness whereof, I have hereunto signed my name, in the presence of two subscribing witnesses.

JOHN FR. BECHMANN.

Witnesses:

J. R. DRAKE,

ALBERT HAIGHT.