

# UNITED STATES PATENT OFFICE

CHARLES J. TINNERHOLM, OF BROOKLYN, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE HAMMONASSETT SOLE LEATHER COMPANY OF NEW YORK.

IMPROVEMENT IN COMPOSITIONS FOR REMOVING HAIR AND GREASE FROM HIDES.

Specification forming part of Letters Patent No. **211,532**, dated January 21, 1879; application filed December 6, 1877.

*To all whom it may concern:*

Be it known that I, CHARLES J. TINNERHOLM, of the city of Brooklyn, in the county of Kings and State of New York, have invented and discovered a new and useful Compound or Composition for Separating Hair, Fur, and Grease from Hides and Skins, and preparing them for tanning or curing, of which the following is a specification:

The ingredients of this compound, and the proportions in which they are to be mixed for the purposes indicated, are as follows, viz: pure water, five hundred gallons; unslaked lime, one barrel; soda-ash, one hundred pounds; saltpeter, (sal-niter,) twenty pounds; flowers of sulphur, ten pounds.

The above quantity is for treating one hundred ox-hides, (or two hundred sides,) and the following is the manner in which the said compound is to be prepared, used, and applied for the purposes indicated: Clean the hides by water of all salt and impurities, allowing green hides to soak one day and dry hides eight days, or thereabout. Then take of pure water, five hundred gallons; of unslaked lime, one barrel; of soda-ash, one hundred pounds; of saltpeter, (sal-niter,) twenty pounds, and of flour of sulphur, ten pounds. Mix all of said ingredients well together until they are thoroughly dissolved. Then place the hides so cleaned in the said solution or composition, and allow them to remain in it forty-eight

hours. Then take out the hides from the solution and unhair them in the usual way.

By the above process the hair is speedily and thoroughly loosened, and the hides, while retaining all the portion of their substance which can be tanned into leather, are, at the same time, entirely cleaned from grease and other substances which prevent them from tanning quickly.

The above process and solution may be used and applied in the process and art of tanning or curing all kinds of hides and skins, care being taken to regulate the time in which they are kept in the solution, according to their thickness and the kind of skins to be tanned.

The said solution or composition can be used and applied by any person of ordinary skill as a tanner.

The said composition has never been used before in any of the processes of tanning.

I claim as my invention and discovery—

The above-described compound, consisting of water, unslaked lime, soda-ash, saltpeter, and flowers of sulphur, in the proportions above stated, to be used and applied as and for the purposes specified.

In testimony whereof I have hereunto set my hand this 28th day of November, A. D. 1877.

CHARLES J. TINNERHOLM.

Witnesses:

ALFRED TAYLOR,  
CHARLES D. RIDGWAY.