

UNITED STATES PATENT OFFICE.

JOHN B. HITE, OF GUYANDOTTE, WEST VIRGINIA.

IMPROVEMENT IN TANNING COMPOUNDS.

Specification forming part of Letters Patent No. 140,040, dated June 17, 1873; application filed March 7, 1873.

To all whom it may concern:

Be it known that I, JOHN B. HITE, of Guyandotte, in the county of Cabell and State of West Virginia, have invented new and Improved Tanning Compounds; and I do hereby declare the following to be a full, clear, and exact description of them:

The invention relates to means for preventing the formation of an incrustation upon the surface of leather which is being tanned, whereby it is often rendered hard, inflexible, and to a great extent impermeable to the tannic acid. My invention causes the hide to become rapidly saturated with the tanning liquid, thoroughly softened, and also rendered tough, as hereinafter fully described.

In the first place, I make a compound, No. 1 of dissolved japonica gum, 14 pounds; salt, 2 pounds; saltpeter, 1 pound; salts, 2 pounds; alum, (dissolved in two gallons hot water,) 2 pounds; sulphuric acid, (dissolved in one quart of warm water,) 1 pound. These ingredients are thoroughly commixed and applied to 42 gallons of strong bark-liquor. I then form a second compound of flour of sulphur, 6 pounds; borax, 4 ounces; hot water, 10 gallons. After cooling these in a barrel, I fill up the latter with cold water. Both compounds are now ready for use. By applying these to the vat of hides, it has been found by practical experiment that the most beneficial results eventuate. The tanning liquor can be graduated in its active strength to the extent desired by the second compound, while the first will have the effect of keeping open the pores of the

skin, and allowing ready access to the tannic acid.

The salts, to which I refer as constituting one of the above-mentioned ingredients, is preferably "Epsom salts," although I desire to embrace any legitimate equivalent thereof.

Fill the vat two-thirds full of bark-liquor, then take one gallon of mixture No. 2 and mix it with 42 gallons of No. 1, and use them jointly with the liquor in the vat, using one gallon of the above mixture of No. 1 and No. 2 to every ten gallons of the bark-liquor in the vat, and then put in the hides; and, as the tanning progresses, the liquor is required to be increased in strength by adding still more of the above mixture of No. 1 and No. 2 in such quantities as the tanner may think necessary, which he can readily judge by examining his hides. The time required to tan with this process varies from two to six weeks, according to the thickness of the hides.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The compound No. 1 formed of the ingredients specified, and in about the proportions set forth.

2. The compound No. 2, formed of the ingredients specified, and in about the definite proportions set forth.

JOHN B. HITE.

Witnesses:

H. W. FRY,
C. E. OWENS.