

# UNITED STATES PATENT OFFICE.

JOHN ROBERTS, OF PORTVILLE, ASSIGNOR OF ONE-HALF TO MILLARD F. WINDSOR, OF BUFFALO, NEW YORK.

## PROCESS OF TANNING.

SPECIFICATION forming part of Letters Patent No. 304,958, dated September 9, 1884.

Application filed October 18, 1883. (No specimens.)

### *To all whom it may concern:*

Be it known that I, JOHN ROBERTS, of Portville, in the county of Cattaraugus and State of New York, have invented a new and useful Improvement in the Method or Process of Tanning Hides or Skins, of which the following is a specification.

This invention relates to an improvement in the method or process of tanning hides or skins, and has for its object to thoroughly tan the hides or skins in less time than heretofore, and to preserve the grain of the hides or skins in a pliable condition.

Heretofore hides and skins have been tanned by immersing the same in the tan-liquor or otherwise exposing both sides of the hides or skins to the same tan-liquor. In this method of tanning the tan-liquor is employed at first in a very dilute state, in order to prevent the grain of the hides or skins from becoming hard or brittle, and the hides or skins are repeatedly subjected to the action of tan-liquors of increasing strength until the process of tanning is completed. This method of tanning necessarily consumes much time.

In practicing my invention the hides or skins are prepared for the process of tanning by soaking, fleshing, lining, shaving, and otherwise treating them in any well-known or suitable manner. When the hides or skins are in the proper condition for tanning, they are covered on the flesh side with a heavy or concentrated tanning solution of as high a specific gravity as can be conveniently prepared. This solution is applied to the flesh side of the skins by a swab or brush or any suitable implement, care being taken that the flesh side of the hide is covered with as much of the solution as will remain thereon. The hide so covered on the flesh side with heavy tan liquor or solution is then folded upon itself, so as to confine the tan-liquor so applied; or two hides or skins so prepared are placed with their flesh sides upon each other, leaving the grain sides of the hides exposed. When a suitable number of hides or skins have been covered on the flesh side with a concentrated solution of tan-liquor in this manner, they are placed in a vat or steep and immersed therein in a weak solution of tan-liquor. In this manner the flesh side of the hide is exposed to the action of the concen-

trated solution of tan-liquor, whereby the body of the hide or skin is more quickly and thoroughly tanned than it would be if a weak solution were used, and the grain side of the hide or skin is exposed to the action of a weak solution or diluted tan liquor, whereby the grain side of the hide is slowly tanned and preserved in a pliable condition. When the concentrated solution applied to the flesh sides of the hides or skins is exhausted, the dilute tan-liquor is drawn off from the vat or steep and the hides are removed and again covered on their flesh sides with a heavy concentrated tan-liquor, when they are replaced in the vat or steep and again immersed in a weak solution, which acts on the grain side of the hide. This operation is repeated a suitable number of times until the hides are thoroughly tanned, the number of times being dependent on the size or thickness of the hides and the strength of the tan-liquor used; but ordinarily three applications will be found sufficient to completely tan hides of ordinary size. A concentrated solution of tan-liquor applied to the flesh side of the hides or skins readily permeates the body of the skins and supplies the necessary tanning material for preserving the same, while the weak tan-liquor applied to the grain sides of the hides or skins acts more slowly in tanning the grain sides of the hides or skins, and does not render the same hard or brittle. When the hides or skins have been completely tanned in this manner, they are dried and finished in any well-known or approved manner.

I am aware that a coating of grease or oil has been applied to the grain side of skins or hides to protect such grain side from the action of tannin-liquor during the immersion of such skins or hides in the tan-vat, and this I do not claim.

I claim as my invention—

As an improvement in the art of tanning hides or skins, the method of treating the hides or skins on their flesh sides with a heavy or concentrated tan-liquor and on their grain sides with a weak or dilute tan-liquor, substantially as set forth.

JOHN ROBERTS.

Witnesses:

JNO. J. BONNER,  
CARL F. GEYER.