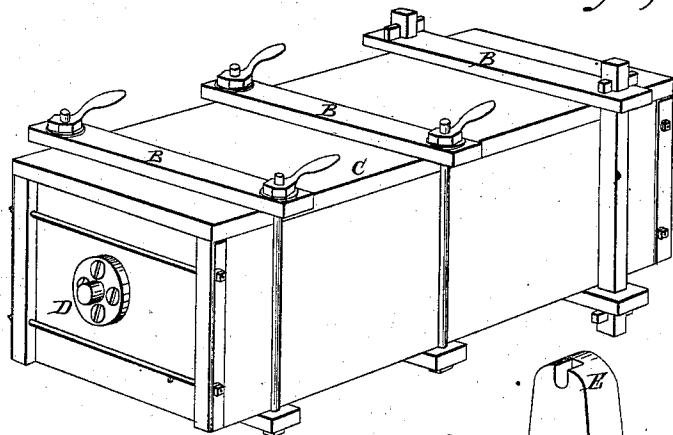


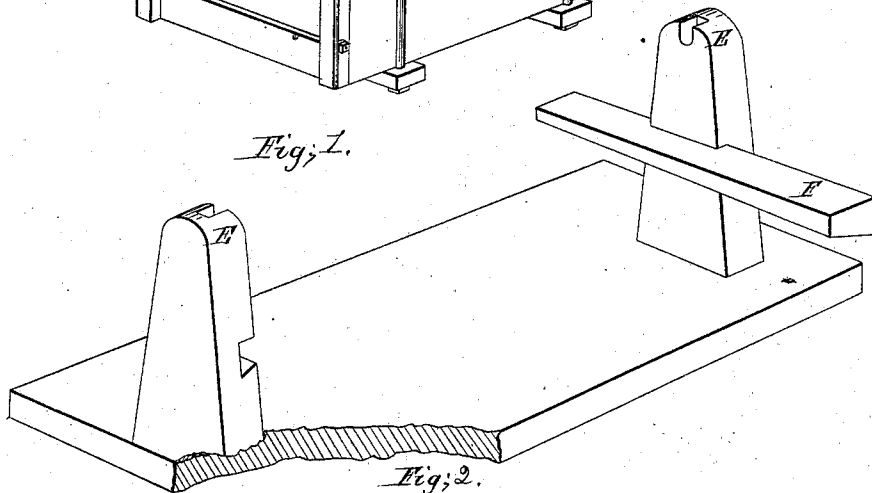
S. Snyder
Tanning Leather.

N^o 80779.

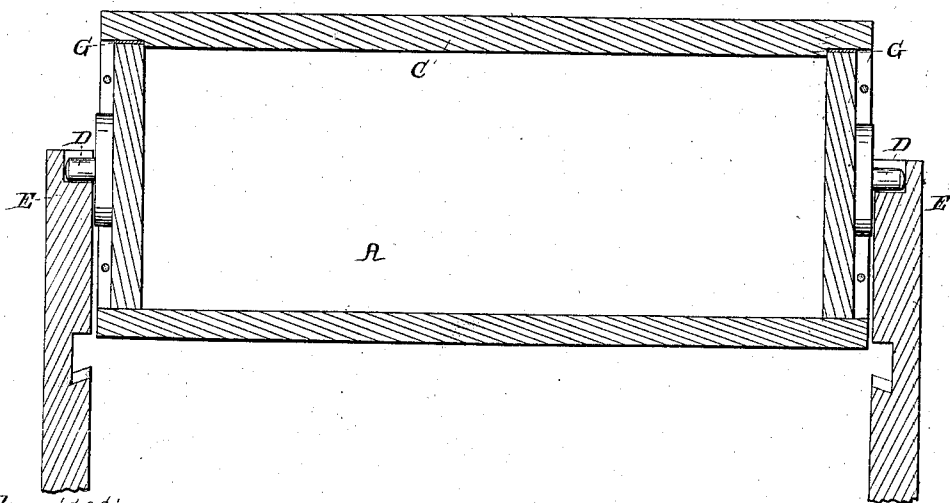
Patented Aug. 4, 1868.



Fig; 1.



Fig; 2.



Witnesses;

J. A. Lawrence
J. G. Stevenson

Inventor;

Simon Snyder

United States Patent Office.

SIMON SNYDER, OF CINCINNATI, OHIO.

Letters Patent No. 80,779, dated August 4, 1868.

IMPROVEMENT IN 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, SIMON SNYDER, of Cincinnati, in the county of Hamilton, and State of Ohio, have invented a new and improved Method of Tanning, which consists in the mode of constructing and operating a reversible and adjustable tanner's vat, wherein the hides or skins are submerged in ooze, and stratified alternately with ground tan-bark, or when the ooze or tanning-liquor only is employed, interposing between the hides, or the folds of the hides or skins, to prevent excess of surface contact, matting, or other fabric, of coarse texture, and in subjecting the entire contents of the vat under process to a varying and equable pressure, which facilitates extraction from the tanning-material, and the absorption by the material being tanned.

To enable others skilled in the art to make and use my invention, I hereby declare the following to be a full and exact description, reference being had to the accompanying drawings, making part of these specifications, and the letters marked thereon.

In Figure 2, letter A represents one of my improved vats, mounted, ready to receive contents, of a rectangular form, and of dimensions to suit, or, which is preferable, four feet square and eight feet long, made of heavy planks, tongued and grooved, or grooved for tongue-strips to make joints, with the ends gained in all around.

B B B represent clamps, for clamping the vat securely together, composed of bars and rods, or tie-bolts, or wooden clamping-bars, with keys or wedges.

D D represent trunnions, bolted or otherwise secured on each side of the vat, so that when lodged in the bearings E E, and the vat is charged, the centre of gravity in the vat will nearly or quite coincide with its centre of motion, when required to be moved.

F F represent keys, fitting in dove-tail notches, to lock the vat in position, at a quarter, half, or whole turn, which can easily be arranged to lock the vat also, at any intermediate part of a turn. A wash-hole is made in the vat, to void the liquor, and cleanse the vat, provided with a stop-cock or plug.

C represents the cover, having a raised surface, to fit closely within top of the vat when closed. The rebated surface fits evenly all round on the top of the vat, with a suitable gasket interposed, before closing and clamping.

I do not limit myself to the precise form of vat, or the parts and material used in its construction, when the vat will allow the hides or skins to be smoothly stretched or folded, so as to be stratified with bark or matting interposed, and be reversed and adjusted at will by manual power, or at set times by mechanism, to facilitate the process of tanning by the friction of percolation, abrasion, and change of pressure, at the same time exclude free atmospheric contact from the contents of the vat during the action of these forces, in conjunction with the well-known chemical forces always developed in the process of tanning.

In order to put my improved vat in operative condition, it is mounted in its bearings, and locked in position, with the top uppermost, and the cover removed. Ooze is then introduced to fill the vat one-third full, or thereabout. Ground tan-bark is then spread over the surface of the ooze, ready to receive the first layer of hides or skins, stretched smoothly out, or folded with intervening bark or matting. Then as alternate layers of ground tan-bark and hides or skins are successively spread within the vat, the ooze is displaced, until the hides or skins, with the substratum of bark, reach the bottom, and the vat is filled to that degree that the cover alone, or with a follower, will so press upon the contents of the vat, when closed, as to hold the entire stratified contents in the same relative position and arrangement of strata during all reversal and adjustment of the vat.

If ooze alone is used as the tanning-material, matting, or some fabric of coarse texture, or its equivalent, is interposed in lieu of bark, so far as the separation of the surfaces of the contiguous hides or skins is necessary; in either case, the hides or skins are to be entirely submerged in ooze.

When the vat has its complement of charge, the cover is put on, with a gum gasket interposed, to form a joint, or some other suitable kind of packing, and is securely clamped together by means of clamps and tie-

bolts, or wooden clamps and keys. The process is then ready to begin, the contents of the vat being now in the condition known in the art as "laid away."

The process of tanning the hides or skins is now begun, and hastened within the vat by the more frequent reversal and change of position of the vat in the earlier, and gradually less frequent change of position of the vat in the later stages of the process. Every change of position of the vat is made to change the pressure within, yet every part of the contents of the vat is, in turn, subjected to the same pressure. Each reversal or change of position of the vat is also made to produce mechanical forces, which co-operate with the chemical forces and promote a greater yield of extractive matter from the tanning-material, and its absorption and combination with the gelatinous and other portions of the material being tanned.

Except at the times of handling or turning, which are much less frequent in my process than in others heretofore in use, where the contents of the vat at all other times of the process lie passive, the air is excluded in order to prevent an injurious amount of gallo-tannic acid from being formed by the absorption of the oxygen of the air by the ooze, and too great acidulation therefrom.

In the first stages of the process, the vat ought to be reversed or changed at least once in every one or two hours, then gradually diminish in frequency on to the end of the process. This requirement depends greatly upon the quality of the material being tanned, and the appearances indicated in the progress of the process when the hides or skins are being handled.

What I claim as my invention, and desire to secure by Letters Patent, is—
The method of tanning, substantially as hereinbefore described.

SIMON SNYDER.

Witnesses:

JAMES MOORE,
WILL. TAFT.