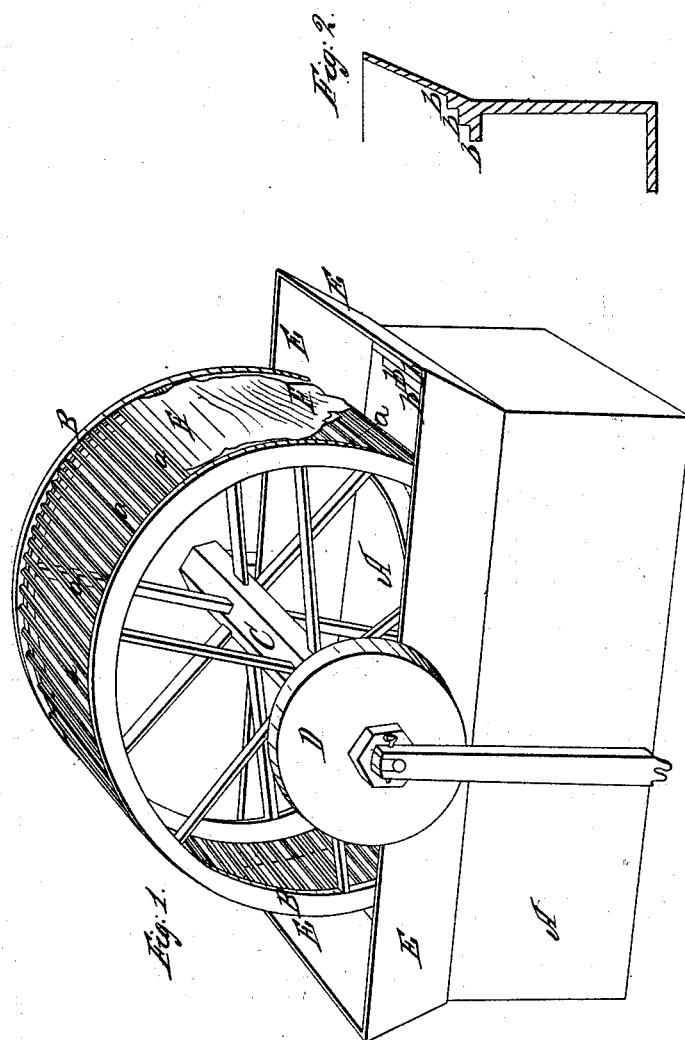


W. Buchanan,
Tanning Apparatus,
N^o 1,906. *Patented Dec. 17, 1840.*



UNITED STATES PATENT OFFICE.

WALTER BUCHANAN, OF MILFORD, PENNSYLVANIA, ASSIGNOR TO DANIEL HOWELL, OF NEW YORK, N. Y.

PROCESS OF TANNING.

Specification of Letters Patent No. 1,906, dated December 17, 1840.

To all whom it may concern:

Be it known that I, WALTER BUCHANAN, of Milford, in the county of Pike and State of Pennsylvania, have made a new and useful Improvement in Processes of Tanning Hides and Skins by Means of a Machine or Apparatus Adapted to that Purpose; and I do hereby declare that the following is a full and exact description thereof.

10 The main feature in my improvement consists, in so constructing the machinery to be employed, as that the hides or skins to be tanned shall be alternately immersed in, and removed from, the tanning liquor, by a continuous or nearly a continuous motion, and this may be best effected by suspending the skins upon rounds, or bars, forming the periphery, of a wheel, which wheel is to be made to revolve in, and over a vat containing the tanning liquor, or ooze.

In the accompanying drawing, A, A, represents a tan vat, which is to be sunk in the ground in the usual way.

25 B, B, is a wheel the shaft C of which is sustained and runs on proper bearings, on each side of the vat.

D, is a wheel by which motion may be communicated to the wheel from any adequate source of moving power.

30 E, E, are sloping sides, or elevations on each side of the vat, made flaring in order to collect the dripping ooze, and reconduct it into the vat. The periphery of the wheel B, B, is composed of slats, or rounds *a, a, a,* which cross from head to head, and which are to be of such length as will be equal to the width of the hides or skins to be tanned. In using this wheel the skins prepared for tanning, in the ordinary way, are to be hung by their middles upon the respective rounds, so that their ends may meet, as shown at F, F. Each skin is to be confined to its round by strings, or thongs, at its edges. On a wheel of nine feet in diameter, with which I have essayed my plan, I have one hundred and eighty rounds, upon which the same number of skins were suspended, and the wheel was then made to revolve, slowly, say at the rate of one turn in a minute, and by keeping the wheel in constant motion for about a week the skins were thoroughly tanned.

50 At the end of the vat, where the skins re-enter it, I form, or place projecting ledges, as shown at *b, b, b,* Fig. 2, which is a section of a part of this end. These ledges

have the effect of confining the skins, in some degree, as they pass over them, and of forcing out a portion of the tanning liquor.

When hides are to be tanned, the apparatus, and procedure will be the same with the foregoing, in all respects, the only difference being in the size of the apparatus. The strength of the ooze, is to be regulated, according to the judgment of the tanner, and does not require, or admit of, any particular directions.

I have herein described that form of apparatus, for carrying on the process, which I believe to be the most simple and efficient, but it will be apparent that the hides, or skins, may be alternately dipped into, and removed from, the tanning liquor in various ways. A wheel, or a segment of a wheel, may be made to vibrate backward, and forward, with a semi-revolution having the skins suspended to it or the skins may be suspended by a frame, which may rise and fall vertically, and by such means the same end might be attained, although with less convenience, than by the apparatus described; and such a manner of proceeding would be found to be invasions of my right, not substantially differing from the machine, and mode of operation, herein described.

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

The tanning of hides, and skins, by attaching them to, or hanging them by, the slats, or rounds, of a wheel such as is herein described, said wheel being placed over a tan vat, in such manner, as that by its revolution, the skins shall be alternately dipped into, and raised from the tanning liquor, by a motion which is to be continuous, or nearly so, during the process, not intending however by the foregoing claim, to limit myself to the precise form of the apparatus, as herein described, but holding myself at liberty to vary the same, as I may think proper, while I attain the same end, by means substantially the same.

In testimony that the foregoing is a full and exact description of my improvement I have hereunto set my hand, before two witnesses, this 22d day of October 1840.

WALTER BUCHANAN.

Witnesses:

W. A. COLONY,
JACOB SWARTWOOD.