

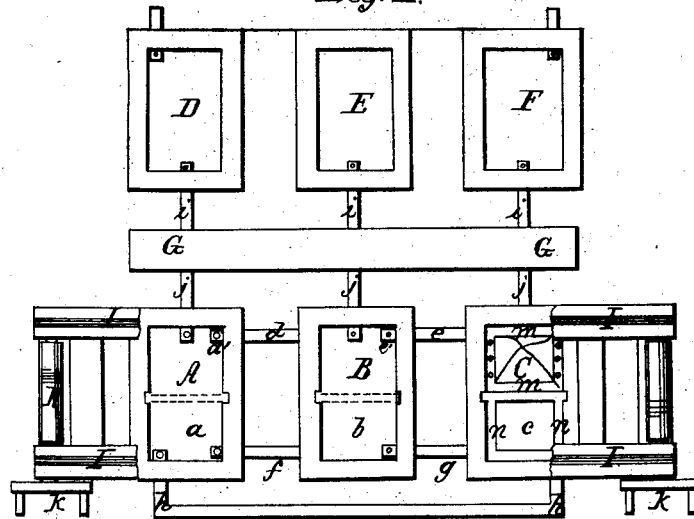
*Rouse & Taylor.*

*Tan Vat.*

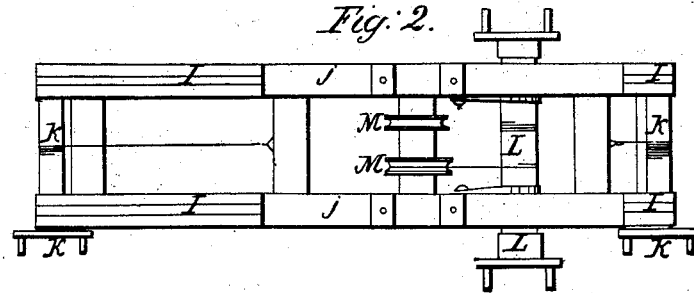
*N<sup>o</sup> 795.*

*Patented June 20, 1838.*

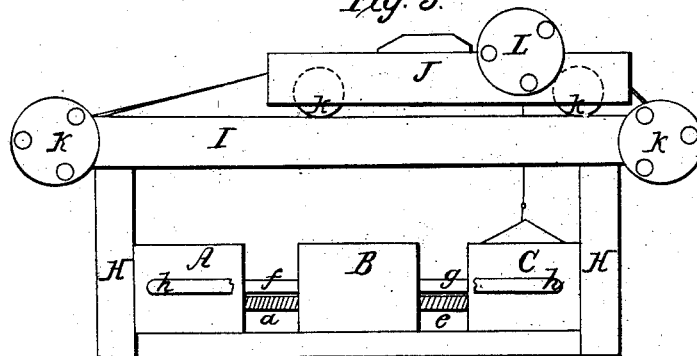
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



# UNITED STATES PATENT OFFICE.

WM. L. J. C. ROUSE AND S. TAYLOR, OF BEDFORD COUNTY, VIRGINIA.

## MODE OF CONSTRUCTING AND MANAGING VATS FOR TANNING LEATHER.

Specification of Letters Patent No. 795, dated June 20, 1838.

*To all whom it may concern:*

Be it known that we, WILLIAM L. J. C. ROUSE and SILAS TAYLOR, of Bedford county, in the State of Virginia, have invented certain Improvements in the Mode of Constructing and Arranging Vats for the Tanning of Leather; and we do hereby declare that the following is a full and exact description thereof.

Our improvement consists in a particular mode of arranging and combining our vats, so that the tanning liquor can be more advantageously transferred from one vat to another, and conveyed into another row of vats when necessary, for the purpose of laying away the hides to be tanned. We also employ, in addition to the plan of establishing a communication between the respective vats, in the way to be described, an apparatus for handling, or removing the hides from one vat to another, by means of which this object is effected with great facility and convenience.

In the drawing herein referred to, we have shown a series of three vats only, in a row, but we are not limited by our plan to any particular number, and consider a series of twelve as best adapted to carry out our plan in a perfect manner; the principle of construction and procedure can, however, be fully made known by means of three.

In the accompanying drawing Figure 1, is a top view of the vats; a portion of the railway, and its appendages, being removed for the purpose of exhibiting the tops of the vats without obstruction. Fig. 2, is a top view of the railway with carriage thereon, and Fig. 3, an elevation of the vats, with the railway and carriage.

A, B, C, *a, b, c*, Fig 1 is a series of three vats, which are to be divided into two compartments each, by partitions crossing them from side to side, these partitions being perforated, to allow a free communication of liquor from one division of each vat to the other, one being intended to contain the bark, and the other the hides or skins to be tanned, the parts A, B, C, being for the reception of the hides, and *a, b, c*, for the bark. A communication is established between these vats, by means of aqueducts, or tubes *d, e*, near the bottoms of each; these tubes open into the vats by holes on their upper sides, as seen at *d', c'*, so that they can be conveniently closed, or opened, by

means of a plug. There are similar tubes *f, g*, about the middle, or nearer the tops of the vats; *h, h*, is a similar aqueduct, or tube connecting the vats, A, and C, for a purpose to be presently explained. D, E, F, are three laying away vats, opposite to the three first described, and communicating with them near their bottoms. Between these two rows of vats there is a long trunk or aqueduct *g, g*, the tubes *j, j, j*, leading into this from the vats A, B, C; and the tubes *i, i, i*, from this into the vats D, E, F; these tubes terminating in the vats by holes opening upward.

In the elevation Fig. 3, the ends of the vats A, B, C, and some of the connecting tubes are shown, and are designated by the same letters of reference. Four posts are erected, to support the railway and carriage shown in Fig. 2. Two of these posts are shown at H, H, supporting the timber I, about six feet above the tops of the vats, and upon which the carriage runs. J, is one cheek, or side of the carriage, and *k, k*, two of its wheels, which run in a groove, or upon a tongue, or edgerail, upon I; the whole arrangement of which is shown better in Fig. 2; a part of it, also, is shown in Fig. 1. K, K, are windlasses, by which the carriage, with its load, may be moved over either of the first series of vats. L, L, is a windlass on the carriage, and M, M, pulleys, over which ropes may be passed for raising the hides. In vat C, is seen the hide frame *m, m*, upon which the hides are suspended, by means of ropes, pins, slats, or other analogous contrivance; it can be readily raised and transferred to other vats, each of which is supplied with strips, or ledges, for supporting the frame, which is well fitted to the hide apartment of each vat. In the compartment *c*, there is a movable reservoir, or vat, *n, n*, which fits into this compartment, and has its sides and bottom perforated with holes; this like the hide frame, may be hoisted by the windlass, and the whole of the bark contained in it, be thus removed with perfect ease.

The following may serve as an example of the process of tanning with this apparatus. Fill *c*, with bark, and C, with hides, and let the water into *c*, when it is judged necessary to remove the hides from this first into a stronger ooze, let them be transferred to vat B, and fill *b*, with bark; then open aqueduct *g*, and let in fresh water upon *c*,

which will force the strong ooze from C, into B, fill C, with fresh hides. When the hides in C, and D, require removing, transfer the contents of B, into A, and of C, into B, open the aqueduct between B, and A, at *d*, and let fresh water into *e*, as before. It will be found that the weaker liquor behind will always keep the stronger in advance, in consequence of the peculiar mode in which the fluids traverses the vats. When the number of vats are not sufficient to tan the hides by passing once through the series, we bring them back to the first vat, and give them a second course in this case we stop the communication between vats C, and B, at *g*, and remove the ooze and bark from C, and put in fresh bark as at first, and then transfer the contents of A, to C, of B, to A, and of C, to B, and open the communication between vats C, and A, by removing the plugs of *h*, *h*, and putting the ooze taken from C, into B. By a similar mode of proceeding the operation may be repeated as frequently as may be necessary to perfect the process of tanning. We are aware that different plans of establishing a communication from one tan vat to another, for the passage of ooze and water have been devised, and that one, at least, has been made the subject of a patent by Mr. Locher. All these plans, however, so far as we have become acquainted with them, differ materially from ours. In Mr. Locher's all the communications from vat to vat are made through openings near their

tops, the liquor flowing through which openings is conducted down near to the bottom of the vat into which it is to flow, a mode of procedure differing essentially from that above described, which enables us to make transfers of the contents of one vat to another, which cannot be effected by his arrangement.

What we claim as constituting our invention, is—

1. The manner of arranging the aqueducts, or tubes, at or near the lower parts of the vats, in combination with those at a greater elevation, but in no case approaching the upper portion of the vats, so that the ooze may be transferred from one to the other, substantially in the manner set forth.

2. We also claim the manner of connecting the lay away vats, with the first series, as set forth, so that the strong liquor may at pleasure be conveyed into them, in the manner set forth.

3. We likewise claim the movable reservoir, or vat, for containing the barks.

WILLIAM L. J. C. ROUSE.  
SILAS TAYLOR.

Witnesses to the signature of William L. J. C. Rouse:

C. H. WILTBERGER,  
LANSTON THORN.

Witnesses to the signature of Silas Taylor:

SAML. P. MITCHELL,  
JULIA ANN MITCHELL.