

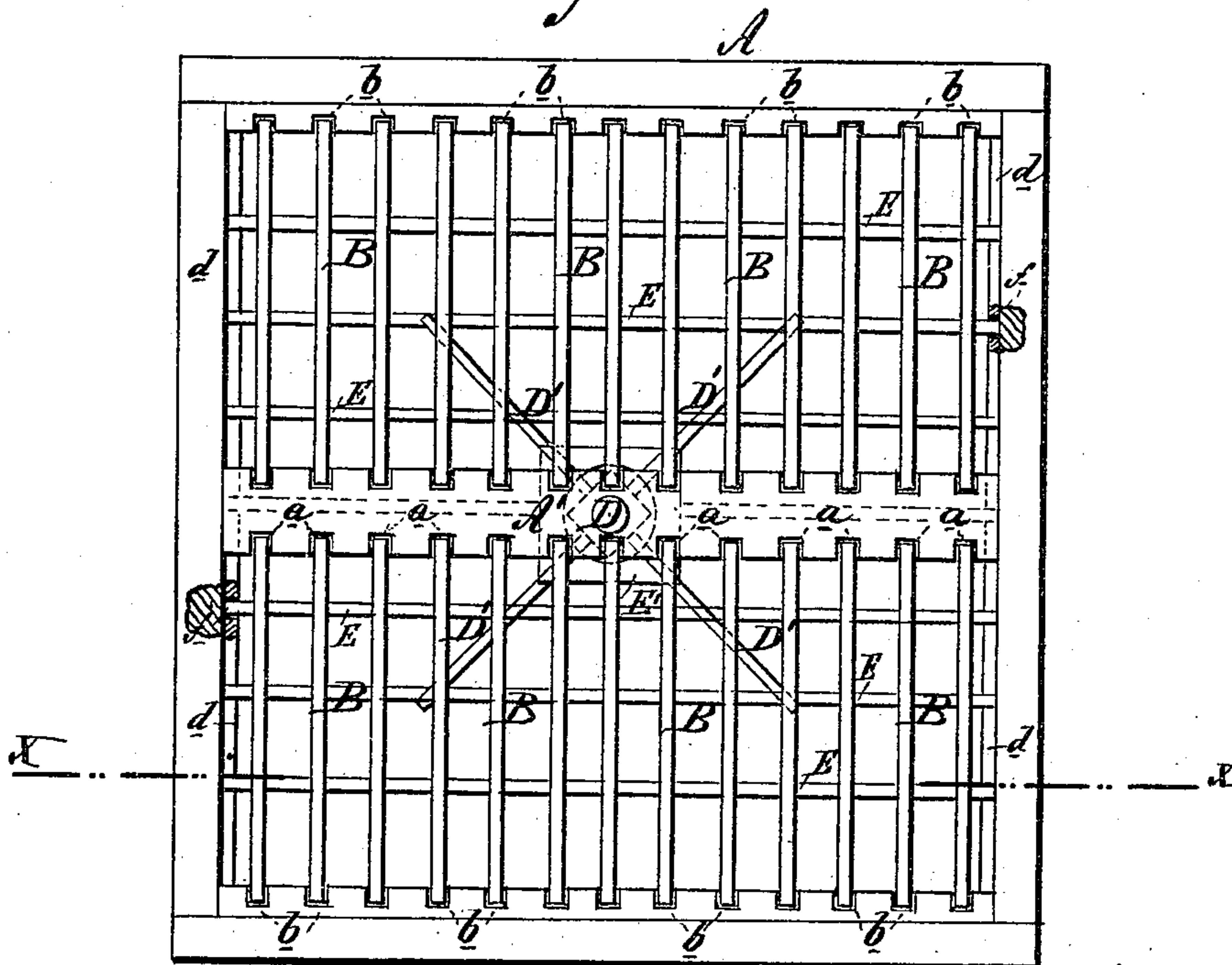
(No Model.)

C. FLOHR.  
Combined Tan Vat and Stirrer.

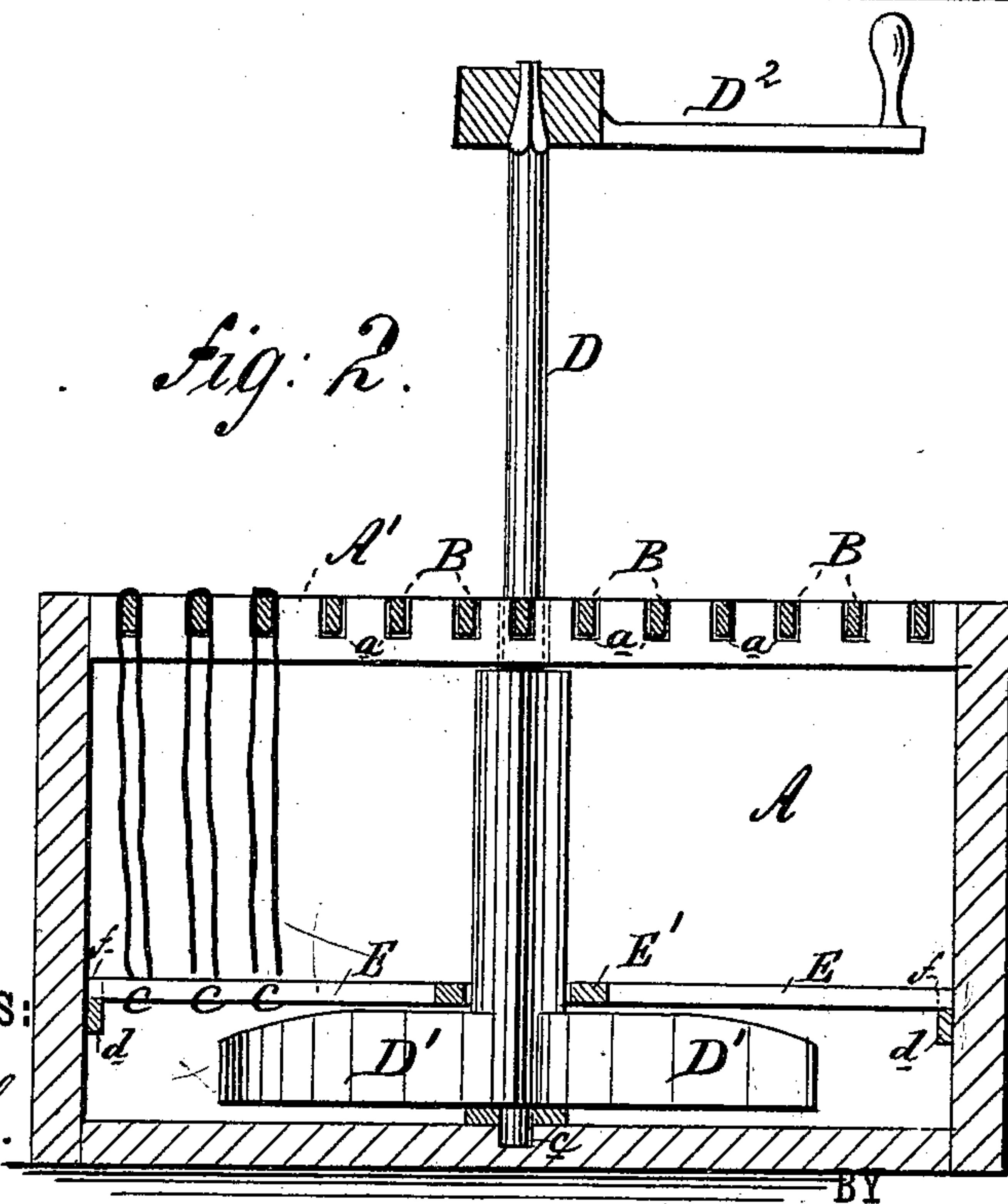
No. 240,988.

Patented May 3, 1881.

*Fig. 1.*



*Fig. 2.*



WITNESSES:

*A. Schehl.*  
*C. Seagwick*

INVENTOR:

*C. Flohr*  
*Mum & Co*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

CHARLES FLOHR, OF CANISTEO, NEW YORK.

## COMBINED TAN-VAT AND STIRRER.

SPECIFICATION forming part of Letters Patent No. 240,988, dated May 3, 1881.

Application filed February 16, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES FLOHR, of Canisteo, Steuben county, New York, have invented a new and Improved Combined Tanning-Vat and Stirrer, of which the following is a specification.

In the ordinary process of tanning leather the hides are thrown into the vats that contain the tanning-liquor, and as the stronger and sour liquor in the vat settles to the bottom the hides have frequently to be handled and moved about, that they may all of them, and all parts of them, be equally exposed to the action of the liquor.

The object of this invention is to avoid the labor and cost of this customary handling of the hides, and to agitate the liquor and expose the hide to the action thereof in such a manner that the tanning process shall be more speedy and the hides more evenly tanned.

Figure 1 is a plan of the device; and Fig. 2 is a sectional elevation on line *xx*, Fig. 1.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents the tanning-vat, having a timber, A', extending centrally across its top, which timber A' has formed in it on both sides a series of sockets, *a*, corresponding with opposite sockets, *b*, formed in two sides of the said vat A. Fitted in these sockets *a b*, parallel with each other, are a number of bars, B, that form in effect a grating covering the top of said vat A. It is designed to suspend the hides (represented at C) from these bars B, so that said hides C shall hang in the tanning-liquor of the vat A.

D is a vertical shaft stepped in the bottom of the vat A, as shown at *c*, and passing up through the center of the timber A'. This shaft D is provided at its lower end with radial arms or stirrers D', whereby the liquor is agitated when said shaft D is rotated, which may be done by means of power applied to the crank D<sup>2</sup>, or by any other suitable means.

On the inside of the vat A, and on the opposite sides thereof, are fastened horizontal battens or strips *d*, provided with series of sockets *f*, for receiving the ends of the horizontal

bars E, that are stretched across the said vat A, just above the radial arms or stirrers D', to prevent any of the hides C from coming in contact with said arms or stirrers D', lest said hides C become injured by the blows of said stirrers D' when the latter are moving. These bars E are laid in a contrary direction to that of the bars B on the top of the said tank A, so that the suspended hides C shall not extend down between them. A rectangular frame, E', surrounding the shaft D, supports the inner ends of some of the bars E.

I do not confine myself to this special arrangement of the bars E, as it may be modified without departing from my invention, the design being to prevent contact between the stirrers and suspended hides.

The length of the arms or stirrers D' may be varied. Long arms may be used if the shaft D be revolved slowly, and short arms may be used with equally good effect if the shaft D be revolved rapidly.

The vat A being filled with tanning-liquor, and the hides C being suspended therein from the bars B, the shaft and stirrers or arms D D' are put in motion with the effect of keeping the liquor in constant agitation, and thus forcing fresh portions constantly against the said hides C. The said hides C consequently absorb the tannin much more rapidly and evenly than if they were lying upon each other in still liquor, as in the old process of tanning.

The hides can, of course, be suspended by their ends or edges from the bars B, or as shown in the drawings.

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

In a tanning-vat, the combination, with the hide-suspending bars B and stirrer D D', of the cross-bars E, substantially as herein shown and described, said bars E being designed to prevent contact between the suspended hides and the said stirrer, as set forth.

CHARLES FLOHR.

Witnesses:

GEORGE JEFFERIES,  
DAVID FAILING.