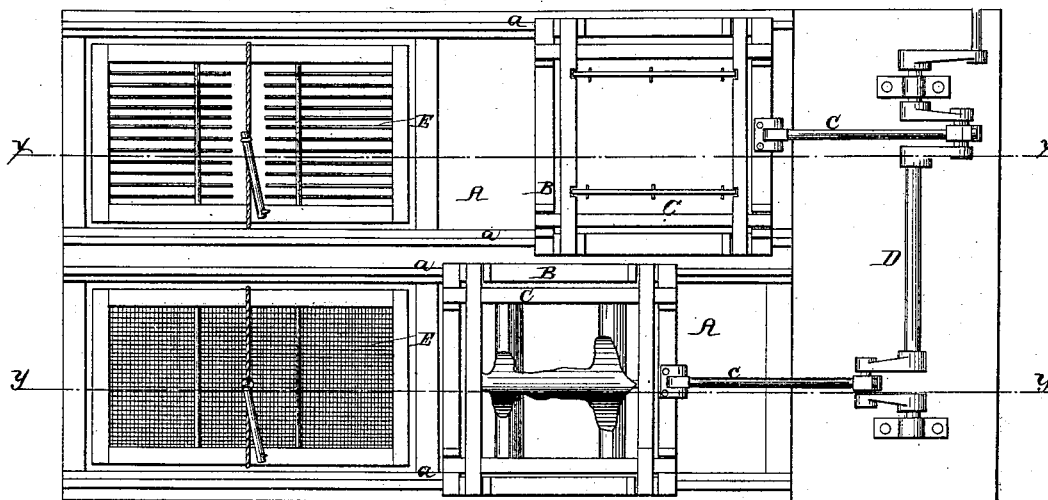


H. Lieberman, Tanning Leather.

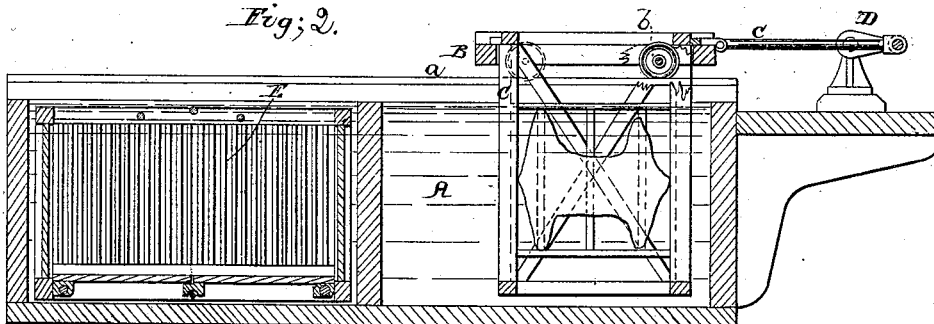
N^o 5,655.

Patented Dec. 19, 1865.

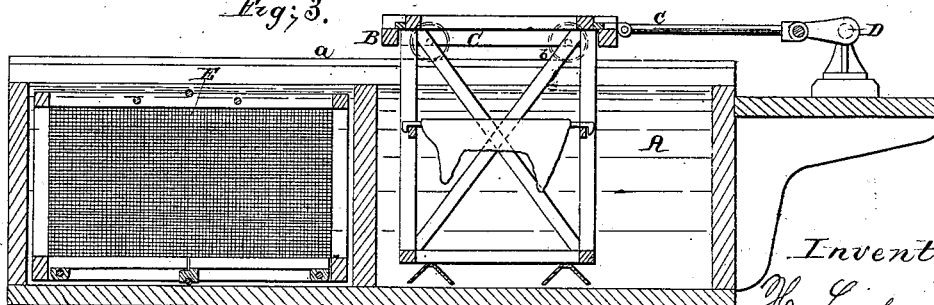
Fig; 1.



Fig; 2.



Fig; 3.



Witnesses;
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UNITED STATES PATENT OFFICE.

HENRY LIEBERMANN, OF PADUCAH, KENTUCKY, ASSIGNOR TO HIMSELF,
PHILIP NUN, JACOB WEIL, AND GEORGE ROCK, ALL OF SAME PLACE.

IMPROVEMENT IN TANNING APPARATUS.

Specification forming part of Letters Patent No. 51,655, dated December 19, 1865.

To all whom it may concern:

Be it known that I, HENRY LIEBERMANN, of Paducah, in the county of McCracken and State of Kentucky, have invented a new and Improved Tanning Apparatus; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a plan or top view of this invention. Fig. 2 is a longitudinal vertical section of the same, the line *x x*, Fig. 1, indicating the plane of section. Fig. 3 is a similar section taken in the plane indicated by the line *y y*, Fig. 1.

Similar letters of reference indicate like parts.

This invention relates to an apparatus which is intended particularly to reduce the labor required for handling the hides or skins during the process of tanning. This purpose is effected by the use of baskets provided with a large number of hooks or cross-bars, on which the hides or skins can be hung, said baskets extending down into the pits and being suspended from truck-frames, which rest on suitable rail-tracks, in combination with a crank-shaft connecting by suitable rods with said baskets, in such a manner that by turning the crank a reciprocating motion is imparted to the baskets and the desired agitation of the hides in the tanning-liquors is effected. The operation of laying away the leather for the purpose of increasing its weight is also facilitated by the use of baskets, which are provided with tilting bottoms, and which are fitted with alternate layers of tan and leather and immersed into the pits partially filled with tanning-liquor, in such a manner that the entire mass of leather can be raised from the pit and lowered therein in a short time; and when it is desired to take the leather out the operation can be effected with ease and facility simply by raising the baskets and allowing their bottoms to swing open.

A A represent two pits, which are dug in the ground at such a distance apart that room is obtained for the rail-tracks *a a*, which ex-

tend through between the pits and on their sides, as shown in Fig. 1 of the drawings. On these tracks are placed the truck-frames B, which are provided with wheels *b*, so that they can be readily pushed back and forth on the track; and from the trucks are suspended the baskets C, which are intended to receive and hold the hides or skins to be tanned. These baskets are square or of any other convenient form or shape, and they are provided with suitable hooks secured in wooden frames, so that the hides or skins can be conveniently secured to the same in such a position that they do not come in contact with each other, as shown in Fig. 2 of the drawings; or, instead of this, simple bars may be used, on which hides or skins are hung in the manner as shown in Fig. 1.

The baskets are made large enough to hold from four hundred to six hundred hides or skins each, and the trucks from which said baskets are suspended connect by rods *c* with a crank-shaft, D, so that by revolving said crank-shaft a reciprocating motion is imparted to the trucks. By these means the baskets containing the hides are carried back and forth in the pit, and the required agitation of the hides or skins in the tanning-liquor is produced with little trouble and without requiring much manual labor.

It is obvious that the number of trucks and baskets connected to the crank-shaft D can be increased to any desired extent, and it must also be remarked that my reciprocating baskets are equally applicable to the liming, bating, and tanning process. The liming can be effected with my apparatus in from three to four days and the bating in about the same time, whereas by the old process more than twice as long a time is required for either of these processes. The tanning process is completed by my apparatus in half the time required by the old method, and without requiring any labor.

In order to increase the weight of the leather it is necessary that the same shall be "put away" for some time, which is generally effected as follows: A small quantity of ground tan-bark is thrown in the pit, just enough to cover its bottom, then a side of leather, then again ground bark, and so on alternately until the pit is full, and then it is filled with tanning-liquor. The work of emptying such a pit is ex-

ceedingly hard and tedious, and I prefer, therefore, to use a closely-framed basket, E, the bottom or sides of which are made to swing open. This basket I place in the pit, put the hides and tan-bark in the basket, and treat as usual. In order to empty the basket, one man with a suitable crane or hoisting-tackle is enabled to raise the basket, together with the hides, clear out of the pit in ten minutes. The hides can then be left to drain over night. The remaining liquor can be left to run. The basket is replaced in the pit, and by filling the pit with water all the strength of the bark can be extracted, and the weight of the leather is increased with little labor and with the smallest possible expenditure in bark.

These baskets are applicable throughout the entire tannery, and they are of particular advantage for the purpose of extracting tan-bark. If one of the baskets is filled with ground bark and frequently raised from the pit or vat, the strength of the bark is more perfectly extracted than it is if the bark remains constantly in

the pit, and for the purpose of emptying the baskets nothing further is required but to open the trap-doors in their sides or bottom.

The baskets are filled simply by placing them under the discharge-spout of the bark-mill.

What I claim as new, and desire to secure by Letters Patent, is—

1. The reciprocating truck-frames B, carrying the baskets C, in combination with suitable pits, and with a crank or its equivalent, constructed and operated substantially as and for the purpose described.

2. The use of closely-framed baskets E for the purpose of facilitating the operation of leaching bark and "putting away" the leather, as set forth.

The above specification of my invention signed by me this 18th day of September, 1865.

HENRY LIEBERMANN.

Witnesses:

M. M. LIVINGSTON,
C. L. TOPLIFF.