

L. C. England.

Tanning Mch's.

No. 112,232.

Patented Feb. 28. 1871.

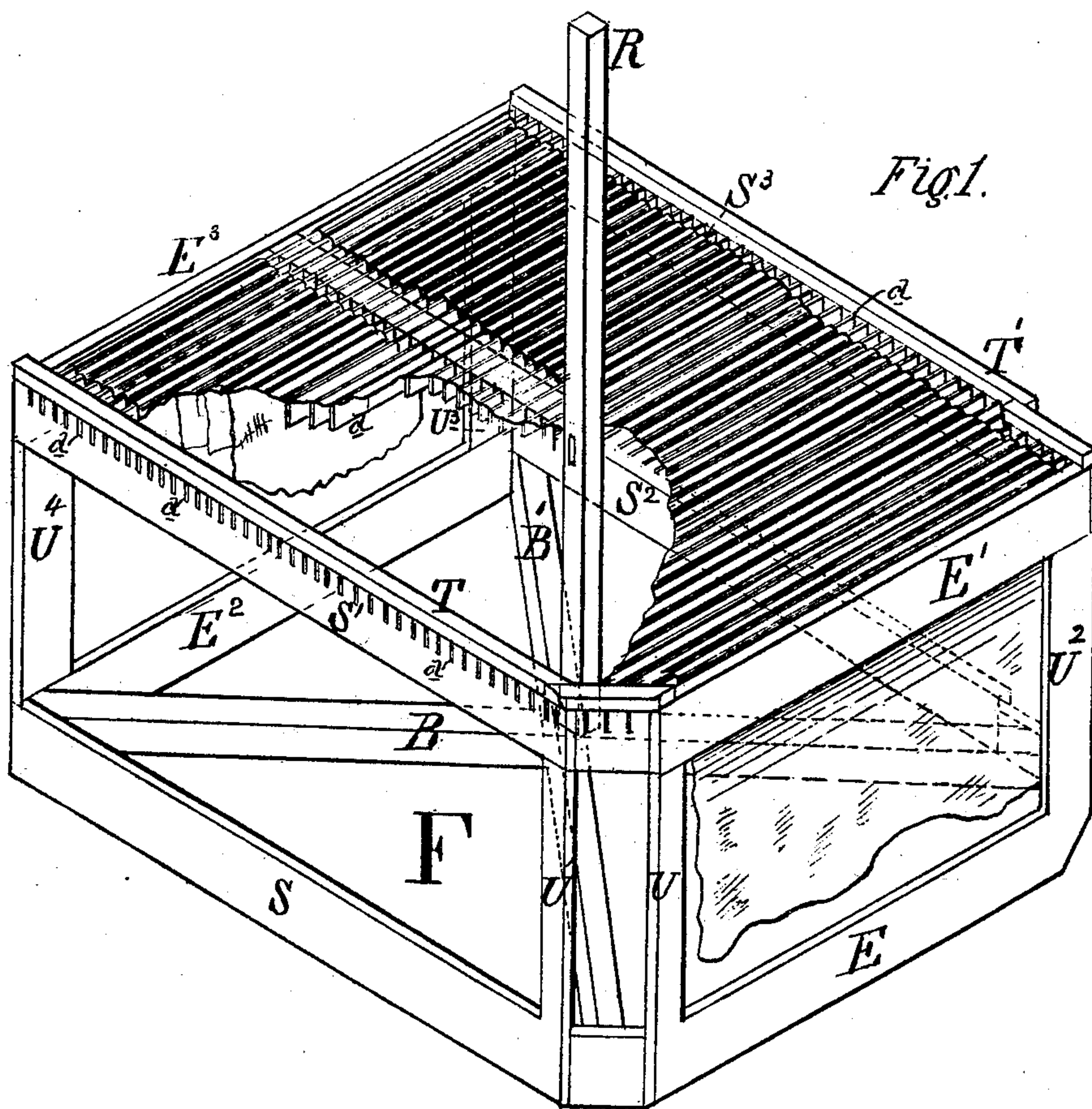


Fig. 1.

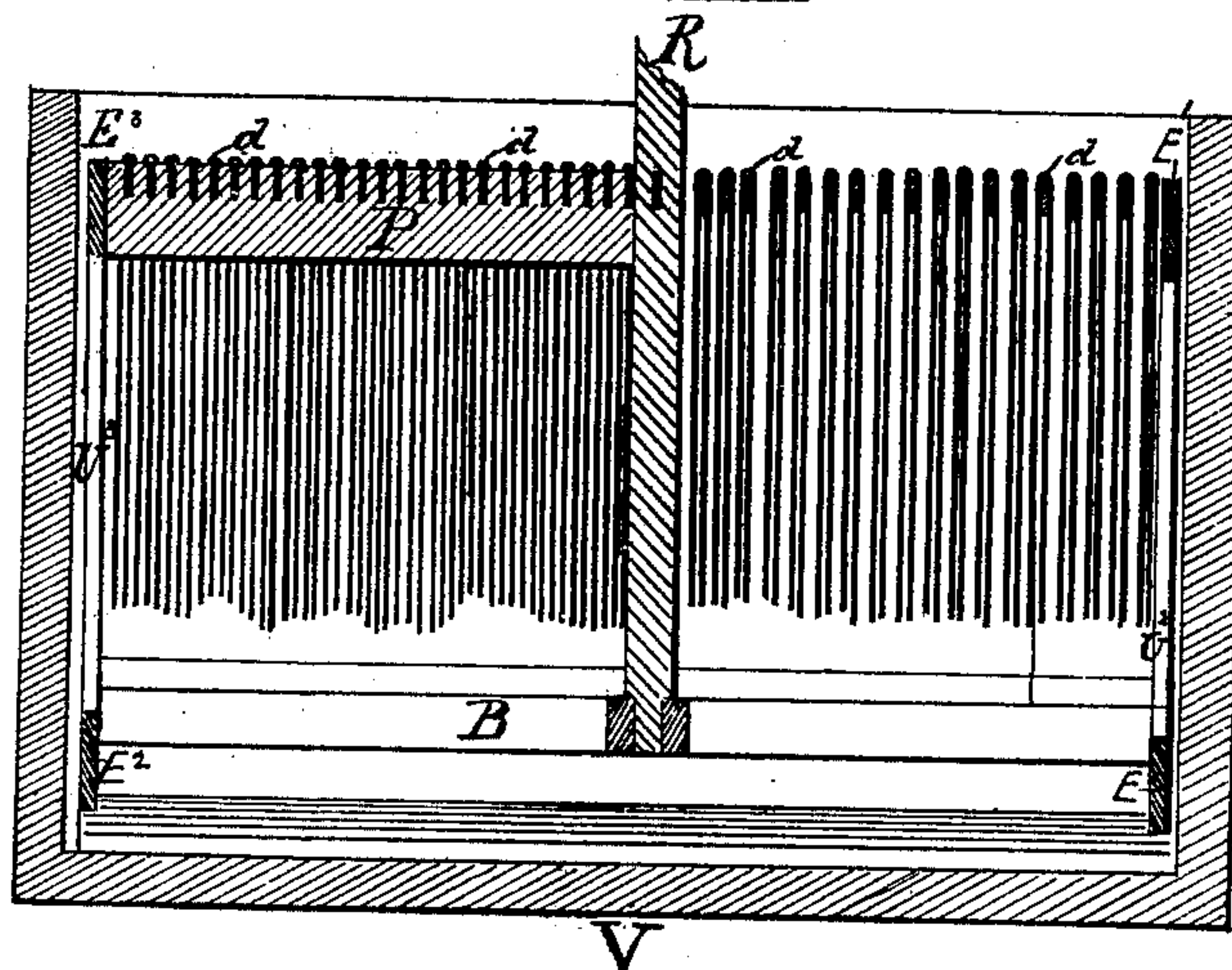


Fig. 2.

Witnesses
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LEWIS C. ENGLAND, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 112,232, dated February 28, 1871.

IMPROVEMENT IN APPARATUS FOR TANNING.

The Schedule referred to in these Letters Patent and making part of the same.

I, LEWIS C. ENGLAND, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Tanning Apparatus, of which the following is a specification.

My invention consists in a more perfect method of keeping the stock suspended in the liquor, so that all parts of every piece may be brought into a more constant contact with the liquors than has heretofore been accomplished, and thereby a greater saving of labor and time required for passing the stock through the desired process either of tanning, liming, or bating, and the production of a smoother grain and better quality of leather.

My invention will also be found to overcome difficulties frequently experienced in the various methods now in use.

Reference is had to the accompanying drawing, in which—

Figure 1 is a perspective view of my improvement in tanning apparatus, showing it removed from the vat.

Figure 2 is a vertical section of the same, showing it applied to a tan-vat.

The frame F is made to conform to the interior of the vat, and consists of the upper and lower rails S, S', S², and S³, and cross-rails E, E¹, E², and E³, which are joined together by means of uprights U, U¹, U², U³, and U⁴. The said uprights act as guides to retain the frame in a horizontal position.

The frame F is also provided, near the lower part, with two diagonal braces, B B', at the point of intersection of which is an upright shaft, R, to which power is applied to operate the frame, the said braces serving to agitate the liquors.

The frame F has resting on the upper portion of it a series of bars, *d d d*, which are held by binders T T', to prevent them shifting when the frame moves downward.

The stock is hung on the movable bars *d d d* with head and butt down, and the proper liquors supplied. The frame is placed in the vat so that the top of the stock resting on the bars may be about eight or ten inches, more or less, below the surface of the liquors. The whole frame is then caused to move upward in a vertical line of a few inches, (four to six being sufficient,) but should not be allowed to raise

the stock above the surface of the liquor. The stock being loose on the bars will, when the frame moves downward, be left suspended in the liquor, entirely free from contact with the bars, thus allowing the liquor free access to the parts of the stock which, when the frame is at rest, adheres to the bars on which it is placed; the upward and downward vertical motion given to the frame will keep the stock at nearly the highest point at which it is raised by the first stroke of the frame upward, the frame being moved faster than the stock would sink in the liquor if unobstructed; every returning upward stroke of the frame will carry the stock back to the highest point again. The frame is caused to move only so fast as will have the desired effect, and at intervals, as occasions may suggest, or as the operator may desire.

The proper liquors are applied to the stock, and made to increase gradually in strength, each day in every vat, by a system, secured to me by Letters Patent No. 68,861, dated 17th day of September, 1867, of strengthening and running the liquors, will tan in very short time and produce the best quality of leather.

The stock is not required to be removed from the vat in which it is first placed until the process is fully completed.

The specific gravity of the frame and stock being very small, the power required to give the necessary motion is very little.

I claim as my invention—

1. The frame F, provided with guides and bars, or other suitable devices for suspending the hides, all arranged so as to operate substantially as described.
2. The diagonal braces B B' and upright shaft R, in the manner and for the purpose herein specified.
3. The guides U, U¹, U², U³, and U⁴, or their equivalents, so as to retain the frame F in a horizontal position, as herein specified.
4. The apparatus herein described, consisting of a frame, F, in combination with suitable devices for giving the same a vertical vibratory movement, substantially as set forth.

LEWIS C. ENGLAND.

Witnesses:

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