

L. H. STANLEY & G. B. DRAPER.  
 Improvement in Machines for Softening Hides, Leather, &c.  
 No. 115,131. Patented May 23, 1871.

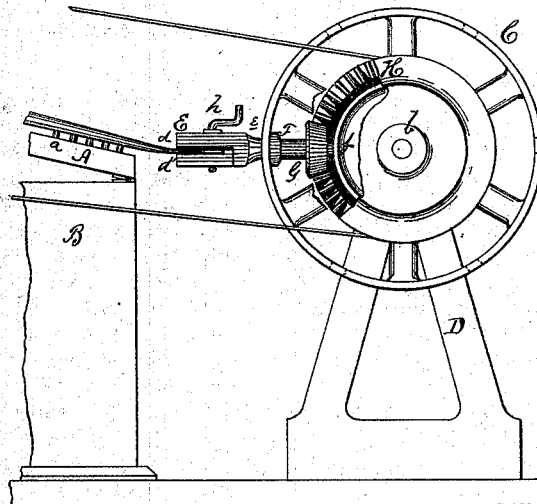


FIG. 1.

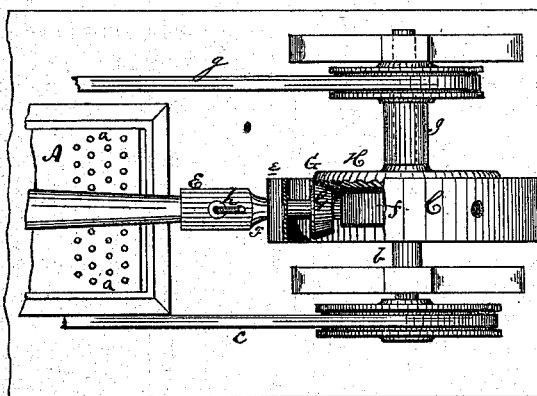


FIG. 2.

WITNESSES.

*Peter J. Hughes*  
*A. J. Lushington*

INVENTORS.

*Lemmas H. Stanley*  
*Samuel B. Draper*

# UNITED STATES PATENT OFFICE.

LINNÆUS H. STANLEY AND GAMALIEL B. DRAPER, OF ATTLEBOROUGH, MASSACHUSETTS, ASSIGNORS TO PETER F. HUGHES, TRUSTEE, ASSIGNOR TO SAID STANLEY AND DRAPER AND NATHANIEL FAUBROTHER AND GEORGE S. FALES.

## IMPROVEMENT IN MACHINES FOR SOFTENING HIDES, LEATHER, &c.

Specification forming part of Letters Patent No. 115,131, dated May 23, 1871.

*To all whom it may concern:*

Be it known that we, LINNÆUS H. STANLEY and GAMALIEL B. DRAPER, both of Attleborough, in the county of Bristol and State of Massachusetts, have invented a new and Improved Machine for Softening Leather; and we do hereby declare that the following specification, taken in connection with the drawing making a part of the same, is a full, clear, and exact description thereof.

Figure 1 is a side elevation. Fig. 2 is a top view.

In the art of tanning leather one of the essential processes of treating the hides is to beat each skin to make it soft and pliable. This operation has always, so far as we know, in tanneries been performed by a workman, who seizes the skin with both hands, and, swinging it high in the air, strikes it with his full force against the ends of a series of wooden pins which are fixed upright in a bench, and which is called the "pin-block." With each successive blow the workman shifts his grasp upon the leather, or so strikes the skin against the block as to change the points of impact between the skin and the ends of the pins; otherwise the skin, by the blows received at the same points, would have its grain broken. The labor of softening the hides by the hand process described is one of the most exhausting character, and few laborers have sufficient physical endurance to perform it for any continued length of time.

Our invention, as exhibited in the drawing, shows a machine for successfully performing all the operations in softening skins which have heretofore been performed by hand.

A (Figs. 1 and 2) represents a pin-block of any preferred form of construction, furnished with a number of wooden pins, *a*, or the surface of the block may be corrugated or roughened. This block is mounted on a pedestal or stand, B, at any convenient height to suit the other parts of the machine.

C is a drum or wheel mounted on an axle-shaft, *b*, which has its bearings in the framework, D, and is made to revolve rapidly by power applied through the drawing-belt *c* or other convenient way. This drum is furnished with a series of clamps, E, (one of which is

shown in the drawing,) arranged radially, the clamping of jaws *d d'* being constructed in any preferred way and attached to the shaft F, said shafts having their outer bearings in the web or rim E of the drum or wheel, and their inner bearings in a rim, *f*, concentric with such web. Each of said radial shafts F is furnished with a bevel-gear wheel, *g*, the teeth of which engage with the bevel-gear wheel H, common to all. This latter bevel-gear wheel is attached to the sleeve I which turns on the axle-shaft *b* of the drum C, and is made to revolve at any desired rate of speed by means of the driving-belt *g*.

The operation of the machine is as follows: Each pair of clamping-jaws is supplied with a skin of leather to be softened, the jaws being made to gripe the leather by means of the screw *h* or other convenient means.

Motion having been given to the pulley-shaft which drives the belt *c g*, the drum C will be caused to revolve with such rapidity as to cause the several skins by centrifugal force to stand out radially from the drum. Each skin will in succession be violently struck against the ends of the pins *a* of the pin-block and will be "crippled" for the moment, but upon leaving the block will straighten out as before. Meanwhile, the clamps are being slowly rotated so that different portions of the surface of the skin will impinge upon the pins.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The improved apparatus for softening leather, which consists in the combination, with a suitable pin-block, A, of a revolving clamp or series of clamps, E, substantially as described.

2. A revolving clamp or series of clamps, E, arranged to have a motion about their axes imparted to them, in combination with a suitable pin-block, substantially as described, for the purposes specified.

LINNÆUS H. STANLEY.  
GAMALIEL B. DRAPER.

Witnesses:

PETER F. HUGHES,  
A. J. CUSHING.