

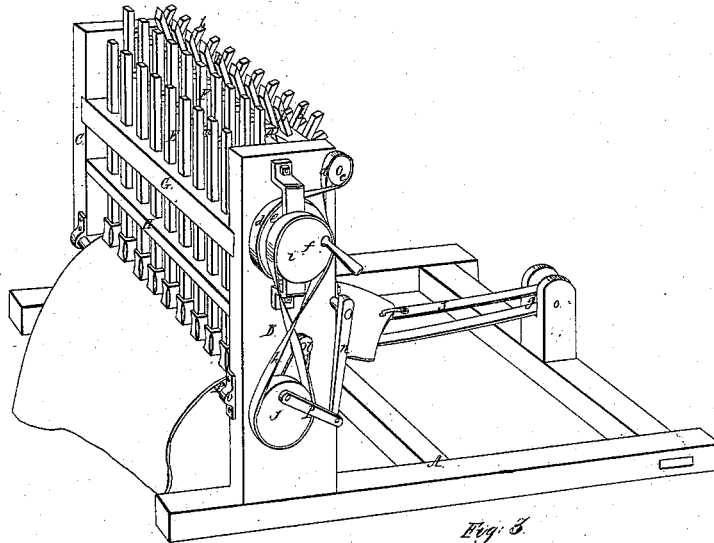
*T. W. Jones,*

*Preparing Hides.*

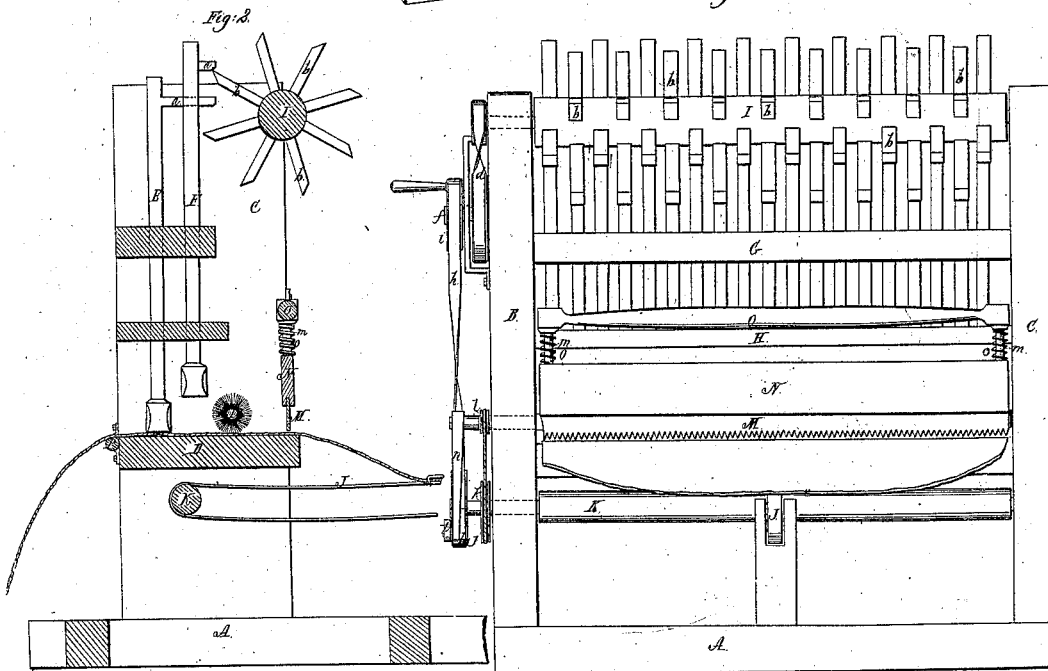
*N<sup>o</sup> 7924.*

*Patented Feb. 4, 1851.*

*Fig. 1.*



*Fig. 3.*



# UNITED STATES PATENT OFFICE.

THOS. W. JONES, OF PHILOMATH, GEORGIA.

## MACHINE FOR PREPARING HIDES.

Specification of Letters Patent No. 7,924, dated February 4, 1851.

*To all whom it may concern:*

Be it known that I, THOMAS W. JONES, of Philomath, in the county of Oglethorpe and State of Georgia, have invented certain new and useful Improvements in Machines for Breaking and Fleshing Hides and for Scouring, Consolidating, and Smoothing Leather, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form part of this specification, and in which—

Figure 1 represents a view in perspective of my machine, Fig. 2 is a vertical longitudinal section of the same and Fig. 3 is a back elevation of the same.

My invention consists in drawing the hides or leather in a continuous manner beneath sets of stampers which occupy such positions with respect to each other that the shoes of one set are opposite the spaces between the shoes of the other, and which being caused to rise and fall alternately, beat and press the hide or leather drawn continuously beneath them.

The machine invented by me for effecting these operations is represented in the accompanying drawings, in which A is a strong frame to which the several members of my machine are secured. At the front of this frame are two strong standards B, C, which support the bed D upon which the hide is supported beneath the stampers. The latter are arranged in two sets E, F, those of the hinder being opposite the spaces between the front set. Each stamper consists of a straight bar with a shoe at its lower end and is supported in an upright position by two guide beams G, H, which are perforated to admit the shanks of the stampers and to allow them to rise and fall freely. Each stamper shank is also furnished with an arm *a* which projects backward from it to be acted upon by the tappet or lifter *b* by means of which the stamper is raised. These tappets are arranged in sets, the number in each set corresponding with the number of stampers, upon a strong horizontal shaft I whose guides are supported in boxes or pillow blocks secured to the standards B, C, one of the gudgeons is fitted with a belt pulley *c* which is driven by a belt *d*, from a belt pulley *e* on a short driving shaft *f* to which the power of the prime mover is applied.

The feed motion consists of an endless

band or chain J which is passed around a shaft K, beneath the bed D and round a belt pulley *g* at the hinder end of the frame A. The shaft K, is put in motion from the driving shaft by means of a belt *h* which encircles belt pulleys *i*, *j*, secured to the respective shafts.

Immediately behind the hinder set of stampers is the rotating brush L; this extends from one standard (B) to the other (C) and is put in motion from the band shaft (K) by means of a belt which encircles a pulley *k*, secured to the band shaft and a similar pulley *l* secured to that part of the brush gudgeon which protrudes beyond the standard B.

The brush is succeeded by a serrated scraper M; this also extends from one standard to the other. It is secured to a beam N, which is hung from a shaft O by two radius bars *m*, these are passed through into sockets sunk in the beam, and each bar has a helical spring *o* upon it which presses the scraper down upon the leather, and allows it to move and accommodate itself to the surface of the leather on which it acts. The gudgeons of this shaft are supported by pillow blocks on the standards and one of them is fitted with an arm *n* which is connected at its lower end by a rod *p* with a crank pin in the face of the belt pulley *j* on the band shaft K, so that as the latter revolved the scraper is caused to vibrate toward and from the stampers. In some cases I prefer to make the scraper vibrate longitudinally instead of transversely, which can easily be effected by well known mechanical devices.

The bed is preceded by a roller P which prevents the hides from binding upon its edge as they are drawn on by the feed band. In brushing hides with this machine a side is introduced beneath the stampers and is made fast to the feed band. The machine is then put in operation by applying power to the driving shaft, *f*. The sets of stampers are raised alternately while the hide is drawn over the bed D beneath them with a continuous motion. As the sets of stampers act alternately, one set is always drawn upon the hide while the other is being raised and dropped, and as the feed motion is continuous the hide is not only beaten but is rubbed by being drawn beneath the shoes of the set of stampers at rest upon it. This rubbing motion in conjunction with the pounding is of great service in breaking and scouring

hides, as it shortens the time required to produce the desired effect. As the hide passes the stampers it is subjected to the action of the scraper which teases up and scrapes off the fleshy matter which adheres to the hide and thus economizes both time and labor by breaking and fleshing the hide at one operation.

When the hides are removed from the tanning vats their surfaces are spotted by the unequal absorption of the coloring matter of the tan; this defect is removed and the color of the leather is rendered much lighter by washing and scouring it. These operations are effected simultaneously by my machine by drawing the hides beneath the stampers and rotating brush (the scraper being thrown out of gear) and by passing them through a vat of water or by allowing water to run upon them during the operation. By this means the surface of the hide is brought to a uniform light color which enhances its value in the market. This machine is also of great value in consolidating the tanned leather. When used for this purpose the scraper is thrown out of gear and a slicker of glass or stone is substituted for the brush; the side of leather is secured to the feed band and is dragged beneath the descending stampers which hammer and consolidate it, while at the same time its surface is smoothed and slicked by the dragging of it beneath the down stamper shoes and the slicker. In most instances a sufficient consolidation will be produced by a single passage through the machine, but should a further consolidation be deemed advisable the leather may be re-passed any number of times until the desired

effect is produced. In such cases I prefer to turn the side end for end after each passage so that all parts of it shall receive the most equable hammering and slicking.

In constructing and describing my machine I have used belts and pulleys for communicating motion from one part to another, and an endless band for feeding the leather. But it is evident that cog wheel gearing may be substituted for the belts and feed rollers or other equivalent mechanical devices for the feed band. It will also be evident to the skilful mechanic that various other modifications may be made in the construction and arrangement of the several members of the machine, to adapt it to the circumstances of any particular case, without any departure from the principles of my invention. I do not therefore wish to limit myself to the precise arrangement and construction herein set forth, but

What I claim as my invention and desire to secure by Letters Patent is—

The method of consolidating and smoothing leather by drawing it with a continuous motion beneath a series of stampers which alternately rise, fall, and rest upon its surface, a portion of the stampers being at all times in contact with the leather so that the smoothing of its surface is constantly going on simultaneously with the consolidation by the blows of the falling stampers.

In testimony whereof I have hereunto subscribed my name.

THOMAS W. JONES.

Witnesses:

E. P. RENWICK,  
P. H. WATSON.