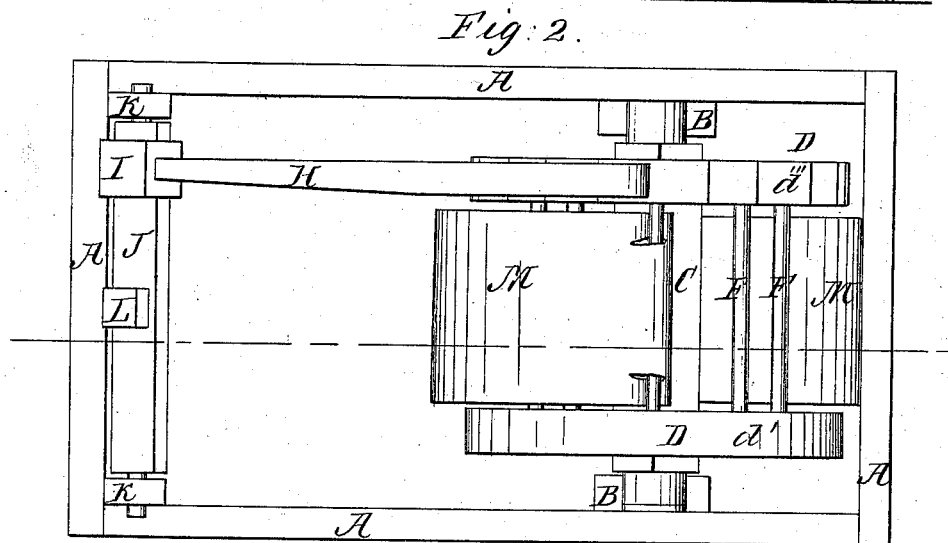
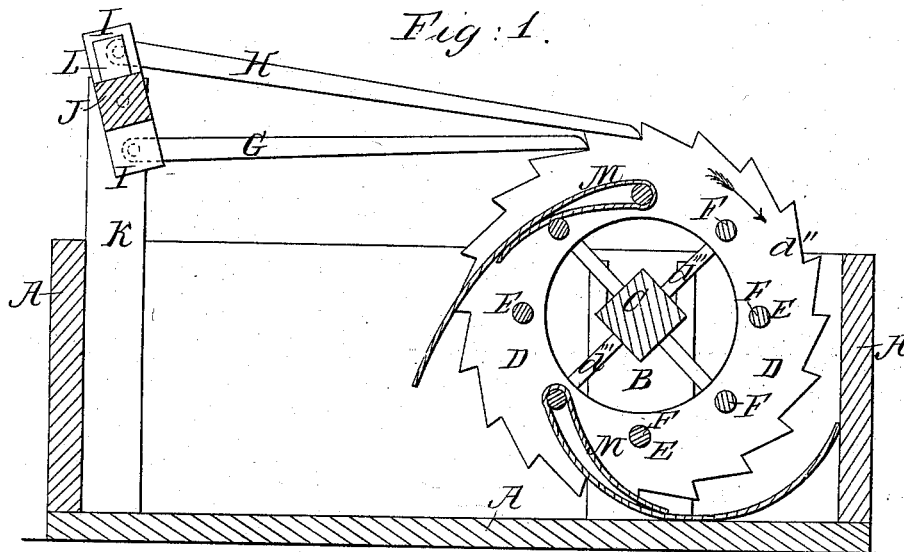


*L. Mackey,  
Preparing Hides.*

*N<sup>o</sup> 54,568.*

*Patented May 8, 1866.*



*Witnesses;  
Jm C Lyon  
Thos Lusk*

*Inventor:  
L Mackey  
Per Munn & Co  
Attys*

# UNITED STATES PATENT OFFICE.

LEWIS MACKEY, OF DUNMORE, PENNSYLVANIA.

## IMPROVED APPARATUS FOR TREATING GREEN HIDES.

Specification forming part of Letters Patent No. 54,568, dated May 8, 1866.

### *To all whom it may concern:*

Be it known that I, LEWIS MACKEY, of Dunmore, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Improvement in Handling Green Hides; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others 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 is a vertical longitudinal section of a tan-vat to which my improvement has been attached. Fig. 2 is a top or plan view of the same.

Similar letters of reference indicate like parts.

My invention has for its object to furnish an apparatus by means of which the hides may be kept in constant motion while in the tanning or graining liquor, the hides being alternately immersed in the liquor and exposed to the air; and it consists in combining with an ordinary tan-vat a wheel, from the circumference of which the hides are suspended, and by the revolution of which the hides are alternately immersed in the liquor and exposed to the air, as hereinafter more fully described.

A is an ordinary tan-vat, to the sides of which are attached posts or supports B for sustaining or forming the bearing of the shaft C of the wheel D. The shaft C revolves in bearings on the supports or posts B.

The ends  $d'$  and  $d''$  of the wheels are connected to the shaft C by the arms  $d'''$ . Through these end pieces  $d'$  and  $d''$  are formed a series of holes, E, and the ends of the wheel are connected by pins or rods F passing through these holes.

The rods F may be kept in place by buttons or by strips of wood attached to the ends  $d'$  and  $d''$ , and covering the ends of said rods.

Upon the circumference of one of the ends  $d''$  of the wheel D are formed the teeth of a ratchet-wheel, or a ratchet-wheel may be attached to said end piece.

G and H are pawls working in the ratchet-teeth of the wheel D. These pawls are attached by the cross-bar I of the rock-shaft J. The shaft J works in bearings formed in the posts K, attached to the vat A in any convenient manner.

Motion is communicated to the shaft J by the arm L, which arm is connected by suitable gearing with whatever power is employed in the tanning. As the pawls G and H are operated by the shaft J they impart motion to the wheel D, which motion is continued constantly, day and night, during the whole time that the hides are exposed to the action of the tanning-liquor.

The rods F are removable, and the hides M are attached to the wheel D by cutting slits near the side edges of said hides and passing the rods through the slits in the manner illustrated in Fig. 2, the hides being suspended upon the circumference of the wheel, as shown.

By the revolution of the wheel D the hides are alternately immersed in the tanning-liquor and exposed to the air, insuring a fine and even grain to the leather and a uniformity of color in all parts of the hide—results difficult to accomplish by the old process, from the impossibility of exposing all parts of the hide uniformly to the action of the tanning-liquor.

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

The wheel D, in combination with the tan-vat, said wheel being constructed substantially as described—that is to say, so constructed that the hides hang from the outside of the wheel, and as the wheel revolves are alternately immersed in the tanning-liquor and exposed to the air, substantially as described, and for the purpose set forth.

The above specification of my invention signed by me.

LEWIS MACKEY.

Witnesses:

M. M. LIVINGSTON,  
JAMES T. GRAHAM.