

(No Model.)

W. EVANS.
LEATHER DRESSING MACHINE.

No. 507,314.

Patented Oct. 24, 1893.

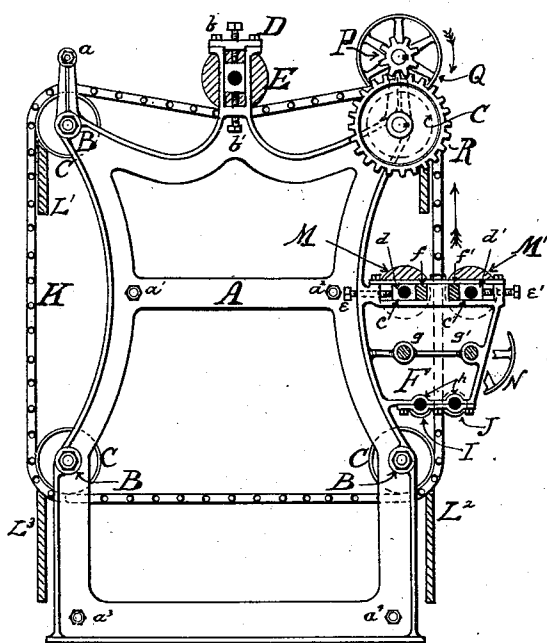


Fig. 1.

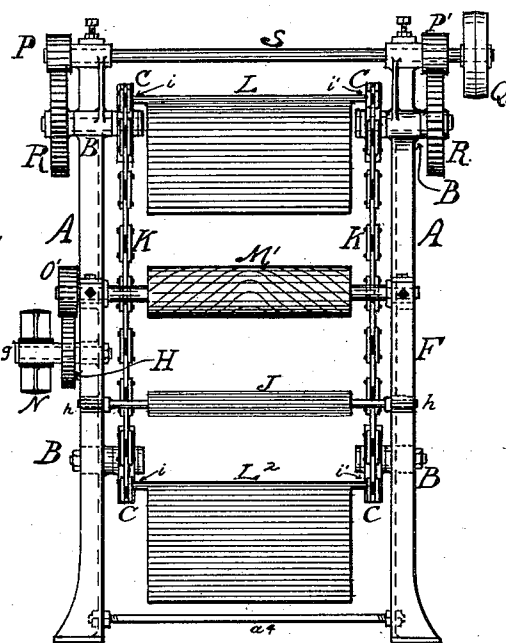


Fig. 2.

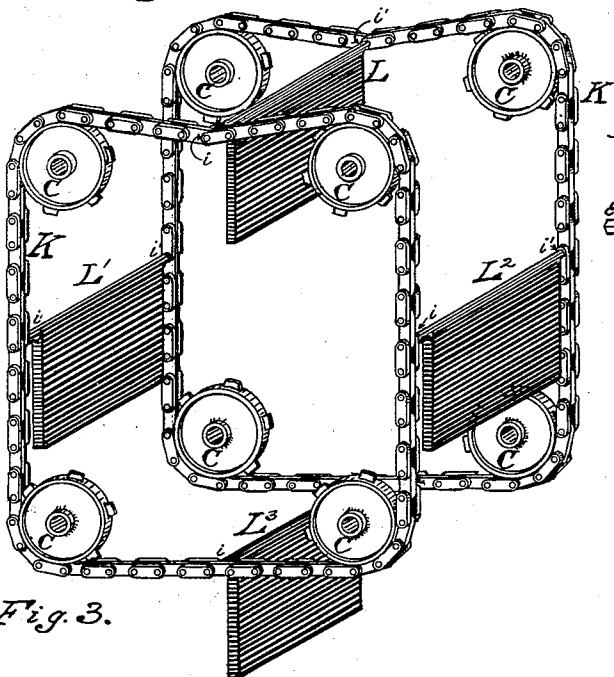


Fig. 3.

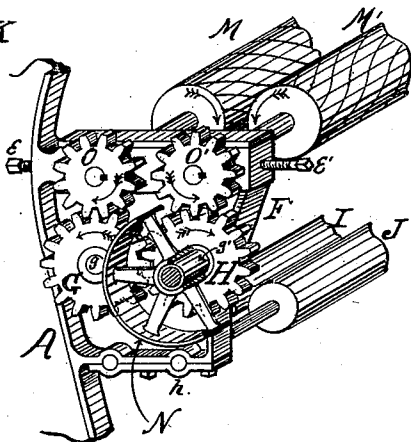


Fig. 4.

WITNESSES:

A. Douglas.
Frank M. Wolf Jr.

INVENTOR

INVENTOR
William Crane
BY
Ruddenow, Krauf & Keyser
ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM EVANS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF,
JOHN H. EVANS, AND ROBERT EVANS.

LEATHER-DRESSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 507,314, dated October 24, 1893.

Application filed March 11, 1893. Serial No. 465,509. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM EVANS, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Dressing Leather, Skins, &c., of which the following is a specification.

My invention relates to improvements in machines for dressing leather, hides, skins, &c., in which two cylindrical knives operate in conjunction with two or more aprons carried upon endless chains.

The object of my invention is to provide a machine for dressing skins, leather, &c., with a constant feed, enabling the operator to place the skins, leather or hides to be dressed on the aprons from time to time, without being compelled to wait till one skin is fully dressed before the next skin is taken up. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side view of the machine. Fig. 2 is a front view of the machine. Fig. 3 is a view of the endless chains with the aprons attached and the chain wheels. Fig. 4 is a view of the operating mechanism of the knives.

Similar letters refer to similar parts throughout the several views.

My machine is constructed with two frames, A. A., held the proper distance apart by tie-rods, a, a', a^2, a^3, a^4 . On each frame are placed four bosses, B, which carry four studs and chain wheels, C; also a slotted box, D, for carrying the tightener wheels and shaft, E, held in position by set screws, b, b' . On each frame there is an extension, F, having at the top two slotted compartments, c, c' , in which slide the knife-cylinder journal boxes, d, d' . The said journal boxes are held in position by set screws, e, e' , against packing pieces, f, f' , which may be of any required thickness; said extensions have two bosses, g, g' , for the studs of gear wheels G. and H. The said gear wheels G. and H. engage with the gear wheels O. and O', imparting the required motion to the knife cylinders M. and M', as indicated by the arrows. At the bottom of each extension there is a double bearing, h , in which run the rollers I. and J. The gear wheel H.

has motion imparted to it by the pulley N. The pulley Q. operates the shaft S. which carries the gear wheels P and P' which in turn engage with the gear wheels R. and R', which impart the motion to the chain wheels C, which carry the endless chain K., to which are attached the aprons, L, L', L², L³, by suitable devices, as shown at i and i' .

The operation of my machine is as follows: The necessary motion having been imparted to the driving pulleys Q. and N., the chain belts K. carry the aprons upward between the rollers I. and J., and the knives M. and M', and the knife cylinders M. and M' are made to revolve in the direction indicated by the arrows shown in Fig. 4. The operator, standing at the opposite end of the machine from the knives, places the leather, skin or hide upon the apron, which is then carried by the endless chains upward between the rollers I. and J. and the knife cylinders M. and M'. After the leather, skin or hide has come in contact with the knives and has been dressed by them, it is carried by the chains upward and across to the operator, who removes the finished skin and replaces it with another to be similarly treated.

The rollers I. and J. serve to steady the aprons and to prevent any swinging or vibratory motion. The number of aprons is unlimited; two or more may be used as desired. In my machine, by the use of two or more aprons as desired, the operator loses but a minimum of time, as he does not have to wait for the return of the finished skin before placing the second one on the apron.

By the use of the gear wheels, G. H. O. and O', the knife cylinders are moved in opposite directions the one to the other, and at an equal rate of speed; in case the knives are not of equal degrees of sharpness, the gearing prevents the duller knife from pulling against the sharper knife, as would happen if the said knife cylinders were driven by a band from off a pulley.

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

1. In a machine for dressing leather, skins, hides, &c., a combination of two steadying rollers, two fixed revolving cylindrical knives and

- two endless chains to which are attached two or more swinging aprons with suitable mechanism for causing said swinging aprons to be carried forward and upward in regular succession between said steadying rollers and revolving cylindrical knives and returned to the starting point without repassing said fixed revolving cylindrical knives; substantially as described.
- 1c 2. In a machine for dressing leather, skins, hides, &c., the combination of two endless chains, two or more aprons hanging therefrom carried by said chains in rotation forward and upward between two fixed revolving cylindrical knives and two steadying rollers, and gear wheels G. H. O. and O', with suitable machinery for operating the same, whereby the action of the knives upon the hide, skin or leather will be the same on both sides; substantially as described.
- 2c
3. In a machine for dressing leather, skins, hides, &c., the combination of two frames with four bosses on each frame, two endless chains, two or more aprons suspended to said chains, eight studs and chain wheels 25 for carrying said endless chains, two belt tighteners and shaft held in position by set screws, two extensions having at the top slotted compartments in which slide the knife cylinder boxes, two steadying rollers, two 30 fixed revolving cylindrical knives and gear wheels for operating the knife cylinders, whereby the action of the knives upon the hide, skin or leather will be the same on both sides; substantially as described.

WILLIAM EVANS.

Witnesses:

THOMAS D. SIMPSON,
A. P. DOUGLASS.