(No Model.)

W. EVANS.

MACHINE FOR DRESSING HIDES, &c.

No. 525,493. Patented Sept. 4, 1894.

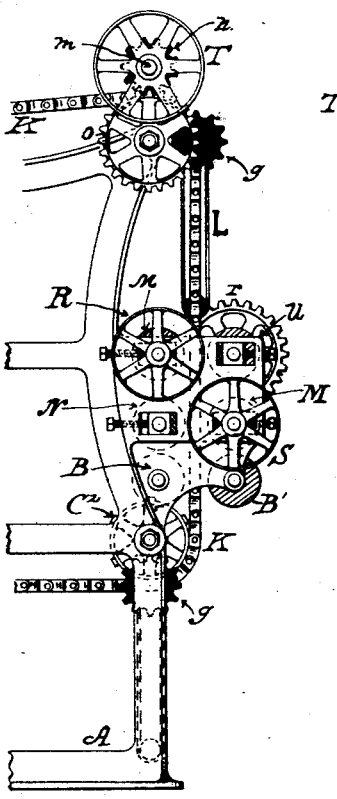

Fig. 1.

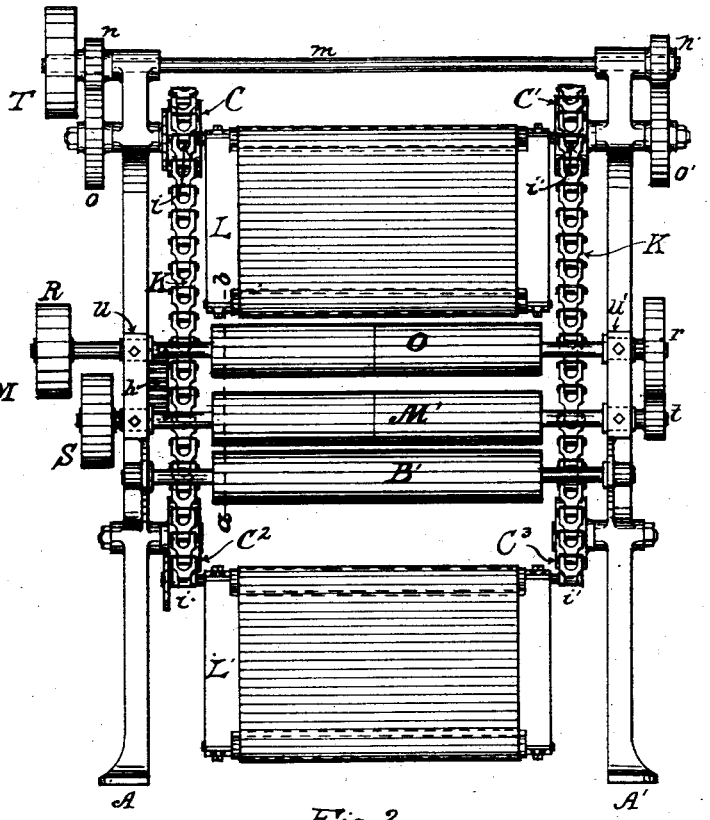

Fig. 2.

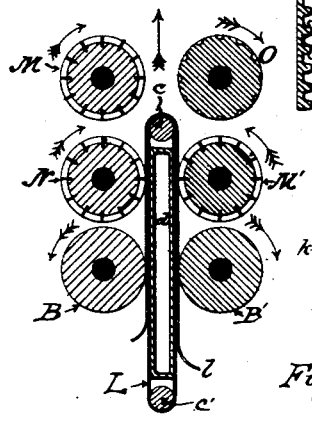

Fig. 5.

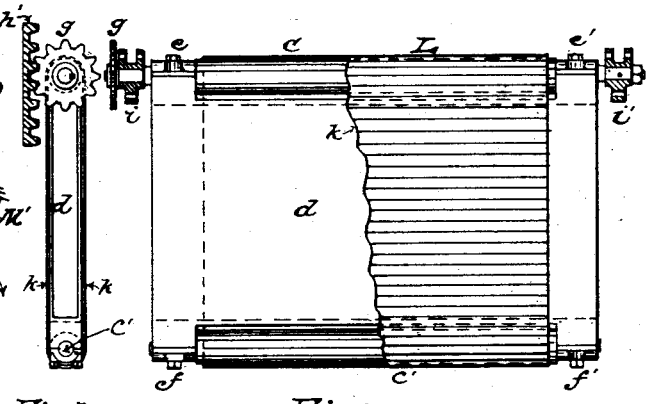

Fig. 4.

Fig. 3.

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MACHINE FOR DRESSING HIDES, &c.

SPECIFICATION forming part of Letters Patent No. 525,493, dated September 4, 1894.

Application filed June 12, 1893. Serial No. 477,259. (No model.)

To all whom it may concern:

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

My invention relates to improvements in machines for dressing leather, skins, hides, &c., for putting out, setting out, striking out, scouring, fleshing, skiving, frizzing, unhairing, &c., as may be necessary within the meaning of the several terms, which are well known among hide, skin or leather dressers, it being especially designed as an improvement on the device shown and described in my application for an improvement in leather dressing machines, filed March 11, 1893, in the United States Patent Office, Serial No. 465,509, and which was allowed to me on May 9, 1893, and it consists in certain novel features hereinafter particularly set forth and claimed, the object being, to produce a more effective device of this character than is now in ordinary use, in that, in this machine it is designed to dress the skin by one operation, as hereinafter more fully described, instead of requiring the operator to readjust the skin, to pass through the machine a second time, to complete the dressing, as has heretofore been the case.

The nature and operation of the improvement will be readily understood, by all conversant with such matters, from the following explanation:

In the accompanying drawings, Figure 1 is a partial side view of my machine, of that end on which the knife cylinders are located. Fig. 2, is an end view of my machine, showing the knife cylinders and driving mechanism for both said knife cylinders and chain wheels. Fig. 3 is a side view of the apron with its movable cover. Fig. 4 is an end view of the apron, showing in section the rack into which the star wheel gears. Fig. 5 is a cross section, through the guide rollers, knife cylinders, setting out cylinder, grip roller and apron, on line *a.—b.* in Fig. 2.

In the drawings, A. A′, is the frame work of the machine.

C. C′, C^2, C^3, are the chain wheels, which carry the endless chains K., to which are attached the swinging aprons L. L′. The swinging aprons are constructed with two rollers, *c.* and *c′*. (see Fig. 3.) The upper roller *c.* has its roller surface grooved, (see Fig. 5) so as to get a biting contact with the endless belt *k.*, which enfolds the aprons L. L′. The lower roller *c′*, is smooth, turning freely with the belt.

The body, *d*, of the apron (see Figs. 3 and 4) is formed with flat surfaces, to offer uniform resistance to the cutting knife cylinders, and is attached to the upper roller, by bearings *e. e′*, and has at the lower end the roller, *c′*, suspended in bearings *f. f′*. The shaft of the upper roller *c.* extends beyond the body of the apron on either side, and is attached to the endless chain, by suitable devices, as shown at *i.* and *i′*. To one end of said shaft of the roller *c.* is fixed a star or gear wheel *g.* which is designed to engage with the rack *h.* for the purpose hereinafter described. The belt *k.* is carried on the rollers *c.* and *c′* over, and in close contact with, the body *d.* of the apron L.

The rack *h.* is fastened to the frame (see Fig. 2) in such position as to engage with the star or gear wheel *g.* when the apron, with its superposed skin, has reached the lower knife cylinder and before it has reached the upper knife cylinder, causing said roller to revolve, carrying with it the superposed skin.

It is apparent, from an inspection of machines of the class to which my machine pertains, and is a fact known to the trade, that when the apron with its superposed skin or hide has passed upward between the revolving knife cylinders, that portion of the skin or hide which is upon the top of the apron is left undressed, and the operator is obliged to replace the skin or hide on the apron and to pass it a second time through the knives, for the purpose of completing the dressing. In my machine as here constructed, when the apron with its superposed skin has reached the revolving knife cylinder M′, the star or gear wheel *g.* engages with the rack *h.* causing the encircling band *k.* of the apron L. to be carried, with its superposed skin, by the revolving corrugated roller *c.*, over from the top of the roller L., bringing the untouched portion of the skin in position to be acted

upon by the knife cylinder M., and leaving on the top of said apron a portion of the skin or hide which has been dressed by the revolving knife cylinder M′, and bringing into contact with the revolving knife cylinder M. the remaining portion of the skin to be dressed, thus finishing the skin with one operation or passage through the machine.

B. and B′ are steadying rollers.

M. and M′ are knife cylinders.

The cylinder N. can be used either as a cutting or setting out cylinder. I prefer to use a setting out cylinder, as the cutting can all be done by the knife cylinders M. and M′.

O. is a spirally fluted grip roller, to hold the skin while it is being dressed by the knife cylinder M.

R. and S. are band wheels, which drive the knife cylinders M. and M′.

T. is a band wheel, which drives the shaft *m.*, which carries the spurs *n.* and *n′*, which engage with the gear wheels *o.* and *o′*. imparting motion to the endless chains.

r. is a gear wheel, engaging with the gear *t.* on the knife cylinder M′, thus causing the grip roller to revolve in a direction opposite to that of the knife cylinder M′. The knife cylinder M. and the cutting or setting out cylinder N. are so geared, by the use of an intermediate gear wheel, that they revolve in the same direction the one with the other.

The operation of my machine is as follows:—The necessary motion having been imparted to the machine by the mechanism described, the apron with its superposed skin is carried forward on an endless chain and upward between the guide roller B. and B′, and brought in contact with the revolving knife cylinder M′ and the cutting or setting out cylinder N.: at the same time the star or gear wheel *g.* engages with the rack *h.*, imparting motion to the corrugated roller *c.*, to the apron belt or cover *k.*, bringing that portion of the skin which has not been acted upon by the knife cylinder M′ in such position that it will be acted upon by the knife cylinder M. By this time the apron is brought in contact with the knife cylinder M., and thence is carried, by the endless chains, upward between said knife cylinder M. and grip roller O., and returned to the operator in a finished condition.

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

1. The herein described apron, designed to be attached to a suitable carrying device of a machine for dressing hides, skins, leather, &c.; said apron consisting of a body composed of any suitable material, a corrugated upper roller, the shaft of which extends beyond said body to enable it to be attached to a proper carrying device, a star or gear wheel affixed to one end of said shaft, adapted to engage with a rack fixed to the frame of the machine, a lower roller, and a covering carried on said rollers over and in close contact with the body of the apron; substantially as described.

2. In a machine for dressing hides, skins, leather, &c., the combination of two revolving knife cylinders M. and M′, the grip roller O., the cylinder N., the apron L., the star wheel *g.*, the rack *h.*, with suitable mechanism for causing said apron to be carried forward and upward between said cylinder N. and the knife cylinder M′ and between the grip roller O. and the knife cylinder M., and also for causing said star wheel to engage with the said rack; substantially as described.

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Witnesses:

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