P. Lennox,

Beaming Hides.

No. 109135. Patented Nov. 8. 1870.

Fig. 1.

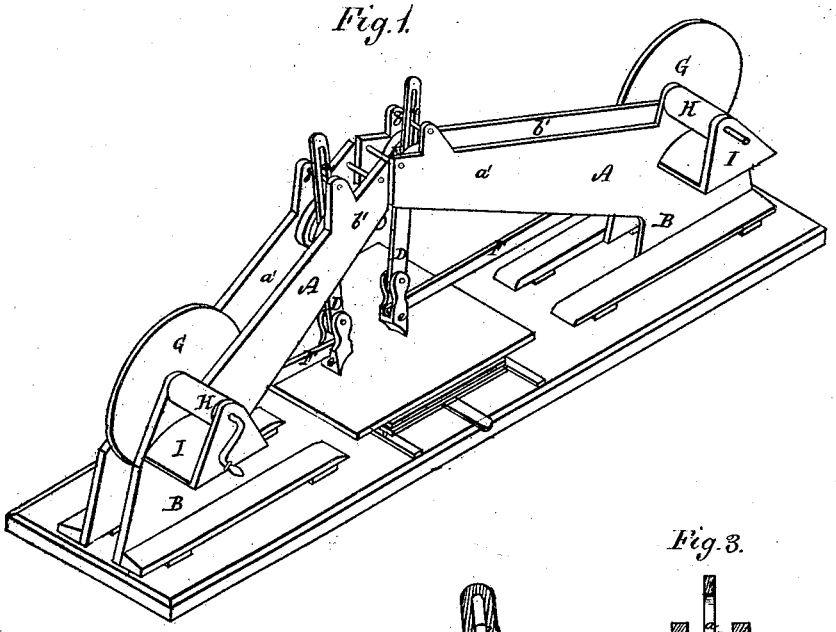


Fig. 2.

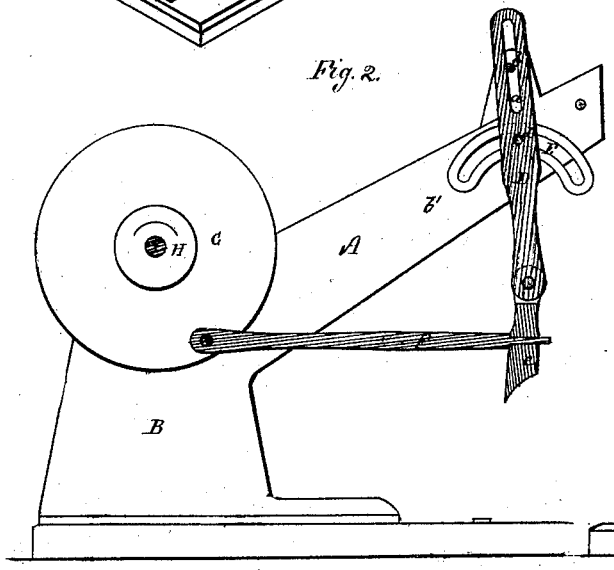
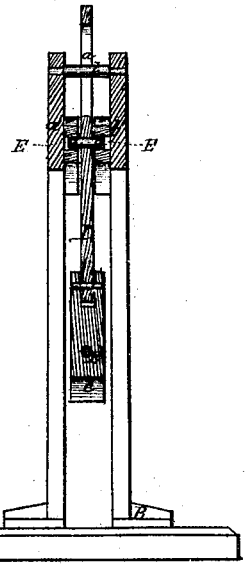


Fig. 3.



Witnesses.
F. L. Daniels
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Patrick Lennox.
by his Attorney
Frederick Curtis

UNITED STATES PATENT OFFICE.

PATRICK LENNOX, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN HIDE-BEAMING MACHINES.

Specification forming part of Letters Patent No. **109,135**, dated November 8, 1870; antedated November 4, 1870.

To all whom it may concern:

Be it known that I, PATRICK LENNOX, of Lynn, in the county of Essex and State of Massachusetts, have made an invention of a combination of instrumentalities for imparting horizontal reciprocating movements to a pendulous rod or suspensory; and do hereby declare the following to be a full, clear, and exact description thereof, due reference being had to the accompanying drawing, making part of this specification, and in which—

Figure 1 is a perspective view, and Fig. 2 a vertical, central, and longitudinal section, of my said invention, Fig. 3 being a vertical and transverse section thereof.

Although the herein-described invention is in principle susceptible of varied adaptation, its employment is especially valuable as applied to machinery for beaming hides or for "scouring" and "sleeking" leather, a particular instance of such class of machinery being shown in Letters Patent of the United States No. 78,380, and issued on the 26th day of May, 1868, to myself, H. H. Robbins, and Edward Hays, all of Lynn, Massachusetts, the use of such machinery in my business having suggested the value, if not the necessity, of my present invention.

The said patented machine, in its general characteristics, is composed of a reciprocating swinging carriage or head, carrying a beaming or sleeking tool, and suitably supported upon a proper frame or standard, such reciprocating tool operating in connection with a movable wheeled car for supporting the skin or hide to be operated upon under the action of the said tool, the said car, or the skin-supporting tablet thereof, having a revolving or swiveling movement imparted to it by the workman, as occasion requires, in order to properly manipulate and reduce the skin.

One object of this invention is to obtain such a motion of the beaming or sleeking tool of leather-dressing machines, whose operating-table is a flat plane, as shall enable such tool to travel over at one traverse a much greater area of hide than can be possible with an object which moves in an arc of a circle, the peculiar movement which I obtain by my invention being a very beneficial one for hide-beaming machines especially.

Another object I have had in view in originating this invention is to avoid the complexity of parts which now attaches to machines of like character, as well as to obtain great strength and stability.

A third object of this invention is to greatly simplify the construction of the car which supports the hide, as well as to lessen the number of movements of the same, which is now unavoidable in manipulating a hide or skin, since such car at present must be provided with a clamp and other means of confining the hide to it while being operated upon.

My present invention obviates this necessity, owing to the adoption of two beaming or sleeking tools, dually arranged and striking out in opposite directions from a given center, and each traversing the hide with like effect.

The necessity of providing some means for enabling the operating-tablet of the movable car to accommodate itself to the pendulous motions of the suspensory of the beaming tool, in machines at present in use, renders the construction of such car expensive and complicated in comparison with that required with my present invention.

This invention consists, mainly, in supporting a pendulous or vibratory rod by means of a pin-and-slot connection, in such manner as to admit of its vertical as well as swinging reciprocations, as well as in combining with the rod or suspensory thus applied and guided a pin or stud, projecting laterally from it, and extending into a sectoral or curved slot formed in the adjacent portion of the frame, upon which the swinging rod is supported or from which it is suspended, the contour and disposition of such slot being such as to produce, in connection with the peculiar mode of uniting the rod and beaming-tool, alternate depressions of such rod and tool as they approach the limit of their traverse, whereby to counteract the tendency of the tool to rise from off the hide at such times as it passes a perpendicular line in either direction; and this invention consists, secondly, in combining together, and so as to operate simultaneously and in opposite directions upon a skin, two beaming-tools, by which means no extraneous device is necessary to secure the skin to the tablet under the action of such tools.

In the drawing accompanying this specifica-

tion, and which illustrates my invention, A denotes a curved or sloping goose-neck or crane, of proper form and strength to sustain the operative parts of the mechanism hereafter alluded to, such crane projecting and rising at an angle of thirty degrees, or thereabout, from a base or supporting-frame or standard, B.

The crane A is open or slotted, and I dispose between the upper ends of its side plates *a'* or *b'* a swinging rod or beam, D, such rod being retained in its proper relationship to the crane by a horizontal pin, *b*, which extends through a slot or orifice, *a*, formed in its upper part, the two ends of the pin or fulcrum being made fast to the crane, and its diameter being such as to nearly, if not quite, equal that of the slot *a*. This mode of supporting or guiding the extreme upper end of the suspensory or rod D permits of slight vertical movements of the same, and of extended vibrations of its lower end, and of the beaming-tool pivoted thereat.

E E represent two curved or sectoral slots or channels formed within or suitably applied to the inner face of the upper end of each side plate of the crane A, and immediately below the pin *b*, before mentioned, such slots constituting the means of suspension proper of the rod D, through the aid of a pair of trunnions or lateral journals, *d d*, projecting from opposite sides of the rod, and extending into them, as shown in Fig. 3 of the accompanying drawing.

The curved slots E E are counterparts of each other in form and disposition, and practically are of uniform diameter throughout their length, and their character and relationship to the crane and bar or rod D are such that, upon a vibratory motion being imparted to the said rod by means hereinafter stated, the trunnions, guided by such slots and executing a curved movement, shall effect a sliding depression of the rod as it approaches the extreme of its traverse in either direction, the combined motion thus imparted to the rod being such as to counteract the elevating tendency of its vibrations, which would otherwise force it to move in a curved path, and enabling me to obtain a horizontal rectilinear movement of the beaming-tool carried by the suspensory D.

I do not consider it necessary to give herein the exact contour of the slots E E, as this is demonstrated only by a geometrical calculation or by practical experiments, varying with circumstances.

I would state, however, that if the changeable fulcrum *b* is fixed to or projected from the suspensory D, and the slot *a* formed in the crane A, (or reverse of the disposition shown in the drawing,) the form of each slot E would be a portion of an ellipse, the two halves of the slot being of like shape.

The carrier to which the beaming or reducing tool is affixed when the machine is in operation is shown at *e* in the drawing as pivoted at its upper end to the lower extremity of the suspensory D, a pitman, F, being in turn pivoted to about the center of the said carrier *e*, while the opposite end of such pitman is pivoted to the wrist-pin of a crank or wheel, G, duly supported and mounted upon a shaft, H, which revolves in bearings or a bracket, I, affixed to one side of the frame B.

The mode of pivoting the tool-carrier *e* to the suspensory D is such that, during a traverse of the two (at the hands of the revolving crank or wheel G) in one direction, the beaming-tool shall be elevated from off the surface of the skin which is being treated, while, during the next succeeding or return traverse, such tool shall be brought forcibly in contact with the surface of the skin.

It may be found, in practice, that various modifications of the above-described mode of suspending and operating the rod D may be effected without changing or departing from the spirit of my invention, and that equivalents for the pin-and-slot connection, in combination with the curved guides E E, may be employed to effect like results.

Claim.

I claim—

Producing reciprocating rectilinear movements in a horizontal plane of a vibrating suspensory by supporting or guiding the upper end of the same upon or by means of a sliding connection, and in combining therewith a device whereby to counteract the tendency of the working extremity of such suspensory to move in a curved or sectoral path.

PATRICK LENNOX.

Witnesses:

FRED. CURTIS,

E. GRIFFITH.