

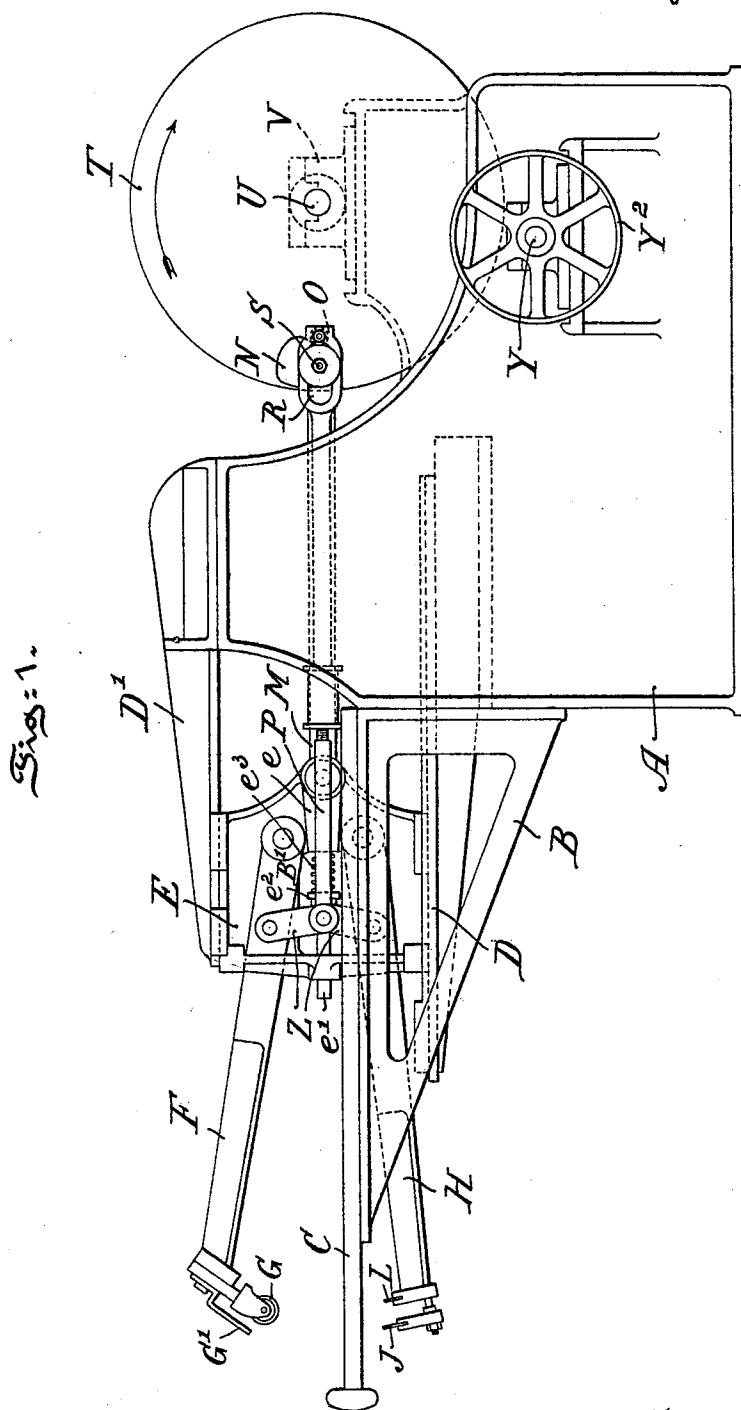
(No Model.)

3 Sheets—Sheet 1.

C. BOUTHÉON.
APPARATUS FOR SOFTENING LEATHER.

No. 582,774.

Patented May 18, 1897.



Witnesses:
Thomas M. Smith
Richard C. Maxwell

Inventor:
Charles Bouthéon,
By J. Walter Longless
Attorney.

(No Model.)

3 Sheets—Sheet 2.

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Fig: 2.

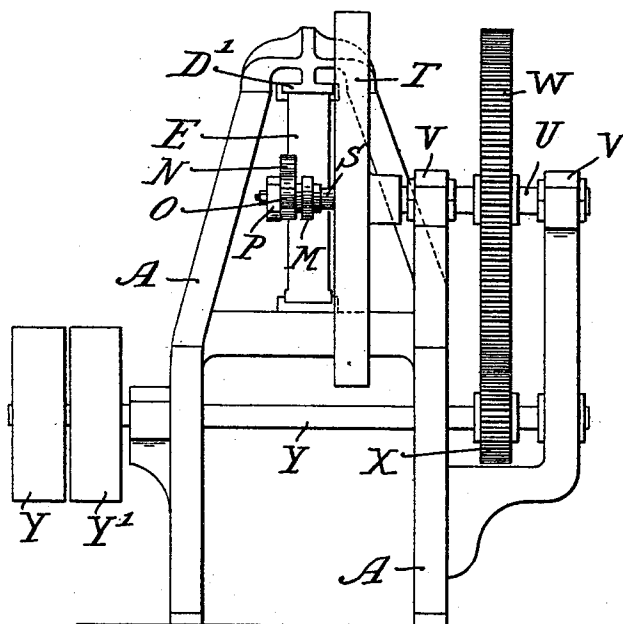


Fig: 4.

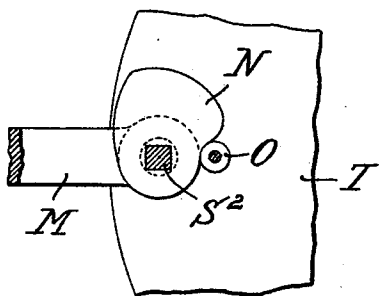


Fig: 5.

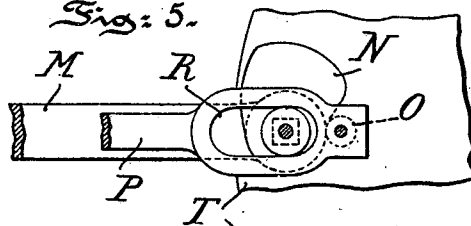
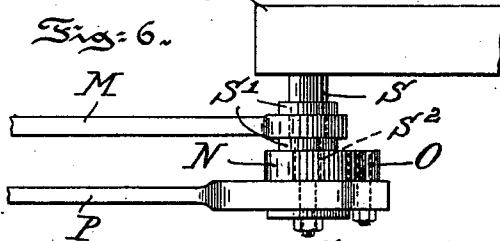


Fig: 6.



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(No Model.)

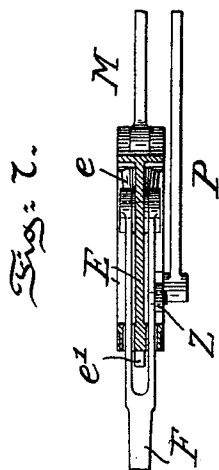
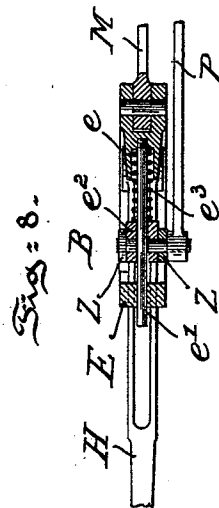
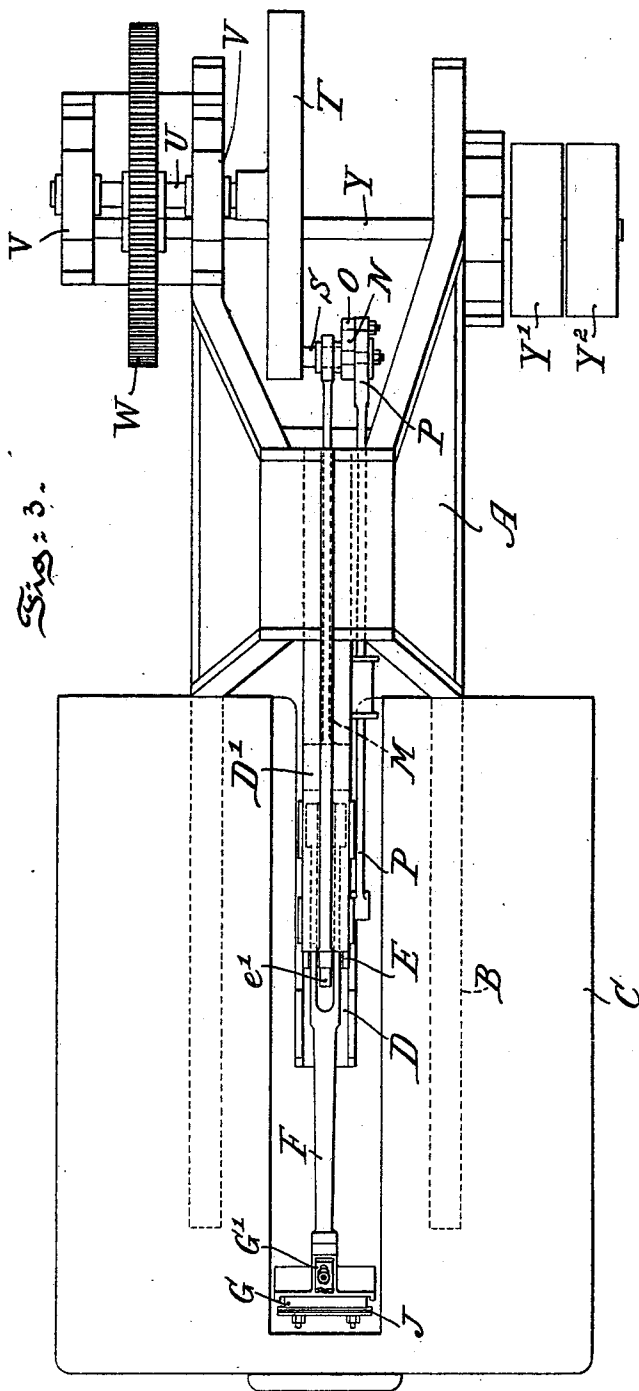
3 Sheets—Sheet 3.

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Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES BOUTHÉON, OF PARIS, FRANCE, ASSIGNOR TO JOSEPH HALL, OF LEEDS, ENGLAND.

APPARATUS FOR SOFTENING LEATHER.

SPECIFICATION forming part of Letters Patent No. 582,774, dated May 18, 1897.

Application filed December 15, 1896. Serial No. 615,745. (No model.) Patented in France September 27, 1892, No. 224,569; in Belgium July 18, 1894, No. 111,046, and in England October 13, 1896, No. 22,714.

To all whom it may concern:

Be it known that I, CHARLES BOUTHÉON, a citizen of the Republic of France, residing at Paris, France, have invented certain new and useful Improvements in Leather-Staking Machines, (for which I have obtained a patent in France, No. 224,569, dated September 27, 1892; in Belgium, No. 111,046, dated July 18, 1894, and in Great Britain, No. 22,714, dated October 13, 1896,) of which the following is a specification.

My invention has relation to a machine for setting out, slicking, or softening hides, skins, or leather; and in such connection it relates particularly to the construction and arrangement of such a machine.

The principal objects of my invention are, first, to provide a machine for setting out, slicking, or softening leather, two arms, whereof one carries the tool adapted to operate upon the hide or skin and the other carries the plates or supports for the hide or skin, said arms adapted to be both reciprocated and closed and opened during the gripping and softening of the hide or skin, and, second, to provide in a machine of the character described, in connection with the two arms, a reciprocating head or block to which said arms are pivoted, a reciprocating connecting-rod adapted to operate said head or block, a disk and stud adapted to reciprocate the connecting-rod, a second rod in slotted engagement at one end with the stud of said disk, and toggle-levers connecting the free end of said rod with said arms, all arranged so that the head and arms are reciprocated by the connecting-rod, and the arms are opened or closed with respect to each other by the rotation of said disk and stud.

My invention, stated in general terms, consists of a machine for setting out, slicking, or softening leather constructed and arranged in substantially the manner hereinafter described and claimed.

The nature and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is a side elevational view of a ma-

chine embodying main features of my invention. Fig. 2 is an end elevation of Fig. 1. Fig. 3 is a top or plan view thereof. Figs. 4, 5, and 6 are enlarged detail views illustrating the connection between the disk and the rod adapted to open and close the arms; and Figs. 7 and 8 are detail views of the spring-stud for opening the arms carrying the tools.

Referring to the drawings, A represents the frame of the machine, to which are secured the brackets B, forming a support for the table C, upon which the hide or skin is laid preparatory to the slicking or softening operation. Between the brackets B and projecting from the frame A is a platform D, grooved or channeled to receive and guide the block or head E, which is adapted to reciprocate on said platform D, and an upper guide D', carried by the frame A. To the head or block E is pivoted one end of an arm or beam F, carrying at its free end the operating-tools G and G', which in the drawings are shown to be a roller and a slicker. The head or block E is likewise pivotally connected to one end of another arm or beam H, carrying at its free end the two vertical plates J and L, of varying elevations, and upon which the skin rests when the roller and slicker act thereon to soften the same. The plates J and L and the roller G and slicker G' coact in the usual and well-known manner. To the head or block E is also pivoted one end of the connecting-rod M, the other end of which is pivotally connected with a stud S, which is secured to and carried by a disk T. The disk T is secured to a shaft U, supported in bearings V on the frame A, and the shaft U has a spur-wheel W, gearing with a pinion X on the countershaft Y, on which are placed the fast and loose pulleys Y' and Y², by means of which the machine may be put into or out of operation.

Referring now to Figs. 1, 4, 5, and 6, the stud S travels with the disk T, and the rod M turns thereon between the collars S' S'. To the square end S² of the stud S is secured a cam N, against the periphery of which rests the roll or runner O, carried at one end of a rod P, which rod is slotted, as at R, to the stud S. During the turning or rotation of

the disk T and stud S the cam N will also rotate and the roll O will ride over the periphery of said cam and thereby shift the rod P back and forth, the rod P riding by reason of its slot R, on the stud S. The other end of the rod P is pivotally connected by toggle-levers Z with each of the arms F and H. A spring-stud B' or equivalent mechanism serves to keep the roll O of the rod P constantly pressed against the periphery of the cam N. This spring-stud B' is constructed substantially as shown in Figs. 7 and 8, as follows: In the head E is formed a cup-shaped socket *e*, from which projects a pin or shaft *e'*, on which is adapted to slide a sleeve *e²*, secured to the toggle-levers Z and to the rod P. Between the sleeve *e²* and cup *e* is placed a spring *e³*, which is coiled around the pin or shaft *e'*, and normally has a tendency to slide the sleeve *e²*, toggle-levers Z, and rod P to the left-hand end of the machine, and to thus, through said toggle-levers Z, open the arms F and H. When the rod P is retracted by the cam N, the sleeve *e²* is also retracted on the pin or shaft *e'* against the tension of the spring *e³*.

In operation, as the disk T revolves it will reciprocate the connecting-rod M and head or block E, the latter traveling between the platform D and upper guide D'. As the block E is retracted by the connecting-rod M, the stud S and cam N also rotate, the cam N assuming a position wherein the roller O rides to the highest point of its periphery, whereby the rod P is retracted and, through the toggle-levers Z, the arms F and H are caused to grip the skin at their operating ends. The stud S and cam N will continue to rotate and the rod P will remain retracted until the connecting-rod M is about to return to its original position, when the high portion of the pe-

riphery of the cam N will clear the roll O and permit the rod P, through the spring-stud B', to shift in a reverse direction and to thereby, through the toggle-levers Z, open the arms F and H.

Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a machine of the character described, a reciprocatory block, two arms each pivoted at one end to said block, a rotatable disk, a rod connecting the block with said disk, a stud pivotally connected with said rod and revoluble with said disk, a second reciprocatory rod, toggle-levers adapted to open and close the arms and operated by said second rod, and a cam secured to said stud and adapted to actuate the second reciprocatory rod during the rotation of said disk, substantially as and for the purposes described.

2. In a machine of the character described, a reciprocatory block, two arms each pivoted at one end to said block, a disk adapted to be rotated, a stud secured to said disk, a rod secured at one end to said block and pivoted at its other end to said stud, a reciprocatory rod adapted to slide on said stud, toggle-levers pivoted to the rod P and to said arms, a cam secured to and rotating with said stud and adapted to shift the rod and toggle-levers in one direction to close said arms, and a spring-stud adapted to shift said rod P, and toggle-levers in the other direction to open said arms, substantially as and for the purposes described.

CHARLES BOUTHÉON.

Witnesses:

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EDWARD P. MACLEAN.