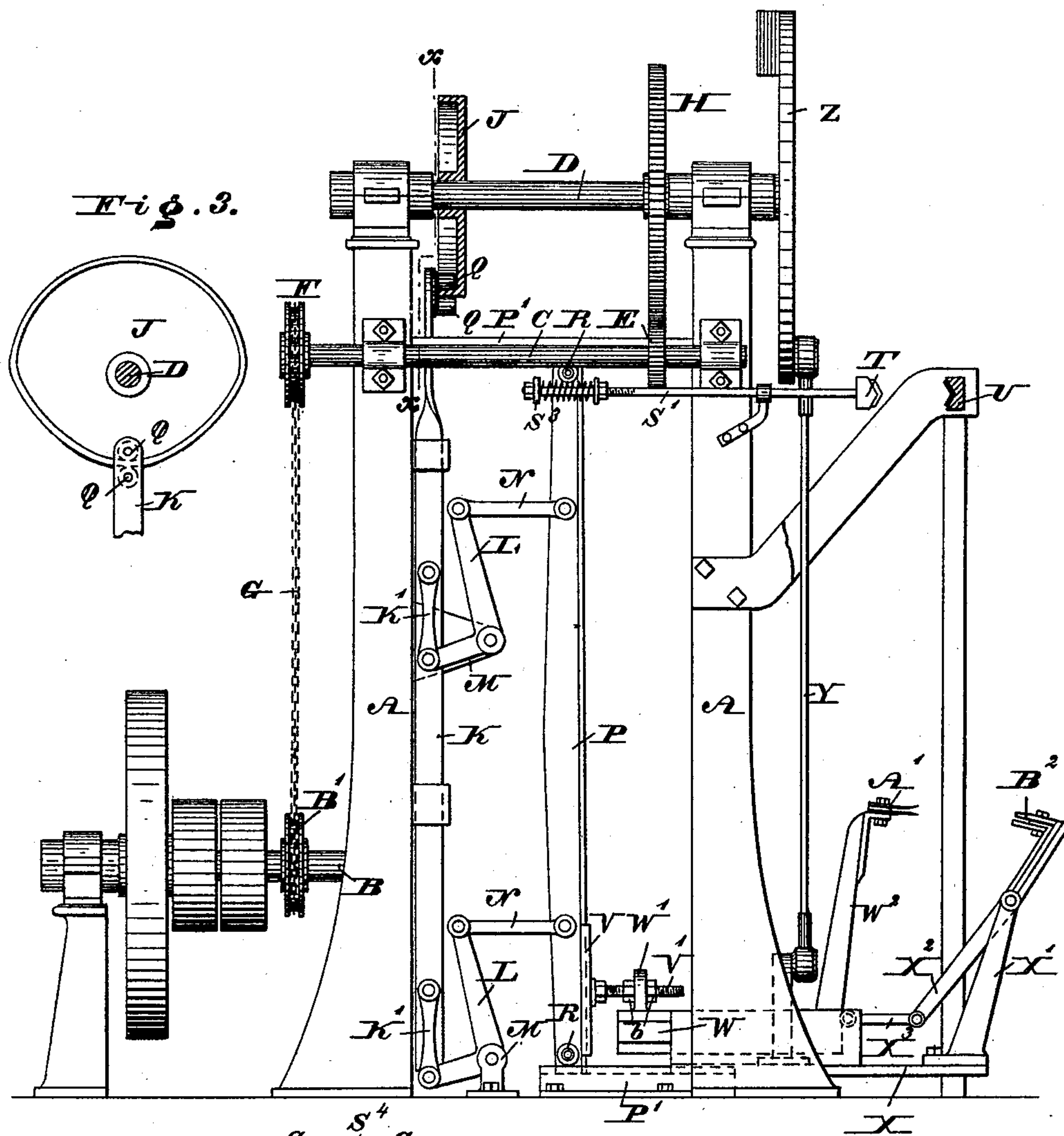


G. V. ANDERSON.

No. 391,221.

Patented Oct. 16, 1888.

Fig. 1.



*Fig. 2.*

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# UNITED STATES PATENT OFFICE.

GEORGE V. ANDERSON, OF WILMINGTON, DELAWARE, ASSIGNOR OF SEVENTEENTHS TO CHARLES W. GOUERT, OF SAME PLACE.

## MACHINE FOR STAKING AND SOFTENING SKINS.

SPECIFICATION forming part of Letters Patent No. 391,221, dated October 16, 1888.

Application filed June 27, 1888. Serial No. 278,337. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE V. ANDERSON, a citizen of the United States, residing at Wilmington, in the county of New Castle and State of Delaware, have invented a new and useful Improvement in Machines for Staking and Softening Skins, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to the class of machines adapted for staking and softening skins as embodied in the Letters Patent No. 380,239, granted on the 27th day of March, 1888.

The invention consists of means, substantially as hereinafter set forth and particularly claimed, whereby the machine is of reduced height, more compact, simplified, and of increased effectiveness.

Figure 1 represents a partial side elevation and partial vertical section of a machine for staking and softening skins embodying my invention. Fig. 2 represents a partial top view and partial horizontal section of a detached portion thereof. Fig. 3 represents a section of a portion on line *xx*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A represents the frame of the machine, and B the driving-shaft mounted thereon, said shaft carrying a sprocket-wheel, B'.

C D represent parallel counter-shafts, which are mounted on the upper portion of the frame A, the shaft C carrying a pinion, E, and sprocket-wheel F. Passing around the sprocket-wheels B' F is an endless chain, G, whereby the power of the shaft B may be transmitted to the shaft C. The shaft D carries a spur-wheel, H, and cam J; said wheel H meshing with the pinion E, whereby power is communicated to said shaft D. The cam J is formed with a horizontally-projecting rim or flange, as shown in Fig. 1.

K represents a rising and falling beam, which is vertically arranged and guided on the frame A and connected with the same by means of links K' and bell-crank or elbow levers L, which are mounted on brackets or hangers M, secured to the frame. Connected with the elbow-levers are links N, which are pivoted to a beam, P, which is vertically ar-

ranged and receives horizontal motions, due to the action of the links N K', elbow-levers L, and beam K, the latter having at its upper end rollers Q, which engage with the rim of the cam J, whereby motions are imparted to said beam K.

The beam P carries at its ends rollers R, which ride on horizontal ways P', attached to the frame A, whereby the beam is guided in its motions. The upper end of the beam is connected with a sliding frame, S, which is guided horizontally on the frame A and carries a head, T, opposite to which latter is a bed, U, supported on the frame, said head and bed constituting a clamp by which the skins are held during the staking action. The faces of the head and bed are V-shaped or angular and clad with rubber or other suitable elastic or flexible material, whereby their holding-power is increased.

The frame S consists of side rods, S', and end bars, S<sup>2</sup> S<sup>3</sup>. The bar S<sup>3</sup> is loosely fitted on the rods S' and bears against spiral springs S<sup>4</sup> encircling said rods, the latter carrying nuts *a*, whereby the location of the bar S<sup>3</sup> and tension of the springs S<sup>4</sup> may be adjusted. The bar S<sup>3</sup> also carries a bearing-piece, S<sup>5</sup>, for the upper end of the beam P, whereby as the beam advances the frame is also advanced, so that the head T is forced against the bed U, the springs S<sup>4</sup> compensating for any irregularity in the skins between the clamp and preventing injury to the parts thereof, due to any excessive strain that may be occasioned.

The lower end of the beam P has fitted on it a vertical slide, V, to which is attached a horizontally-arranged movable cross-head, W, which is mounted on a rising and falling carriage, X, the latter being guided on the uprights of the frame A and receiving motion from a rod, Y, which is attached to said carriage and to a crank-wheel, Z, the latter being keyed or otherwise secured to the counter-shaft D.

The slide V is connected with the cross-head W by means of a horizontally-arranged bolt, V', which is secured to said slide and enters an eye, W', rising from the cross-head, said bolt carrying suitable nuts, *b*, whereby the connection of the slide and cross-head may be adjusted. The end of the cross-head



opposite to the slide has secured to it an arm,  $W^2$ , whose upper end carries the knife  $A'$ .

Rising from the carriage  $X$  is a standard,  $X'$ , on which is mounted a swinging arm,  $X^2$ , 5 whose upper end carries the pad  $B^2$ , and whose lower end is connected by a link,  $X^3$ , with the cross-head  $W$ , it being seen that as the cross-head is moved the knife  $A'$  and pad  $B^2$  are caused to approach and separate, as the case 10 may be, said parts projecting toward each other, so as to act upon the skin when advanced toward each other to full extent.

It will be noticed that as the carriage  $X$  is raised or lowered the cross-head  $W$ , the knife 15 and pad  $A' B^2$ , and the slide  $V$  are carried by the same, said slide  $V$  moving up and down on the side of the beam  $P$  as the latter advances and recedes.

The operation is as follows: Power is communicated to the shaft  $B$ , whereby the parts of 20 the machine are set in motion. A skin is placed adjacent to the face of the bed  $U$  and the head  $T$  advances toward the same. The carriage  $X$  also rises, and when it is at its 25 highest point the beam  $P$  has advanced to its full extent, whereby the head  $T$  presses the skin against the bed  $U$  and firmly clamps the same. The knife and pad now close against the opposite side of the skin, after which the 30 carriage begins its descent, and the knife and pad, following the same act upon the skin, perform the staking and softening operation. When the carriage has completed its descent, the cross-head  $W$  is drawn back by the returning beam  $P$ . The arm  $W^2$  of the knife  $A'$  follows 35 said cross-head, and, owing to the link  $X^3$  and arm  $X^2$ , the pad  $B^2$  is swung outwardly, whereby the knife and pad are separated simultaneously. The head  $T$  recedes, whereby 40 the clamp is opened and the skin released. The skin may now be turned or shifted and then returned to the bed, so that as the machine continues its operation the carriage rises and the head advances, so that the skin is 45 again held, the knife and pad also closing, so that the skin is further staked or acted upon, the operation being continued as long as desired.

Having thus described my invention, what I 50 claim as new, and desire to secure by Letters Patent, is—

1. In a machine for staking and softening skins, the clamp and knife-moving beam  $P$ , 55 connected with operating mechanism consisting of elbow-levers pivoted to said beam and the frame of the machine, and another beam,  $K$ , connected with said levers, and a rotary cam engaging and imparting a rising and falling motion to said beam  $K$ , said parts being 60 combined substantially as described.

2. In a machine for staking and softening skins, a frame with driving-shaft journaled therein, a shaft carrying a cam and connected with and operated by the driving-shaft, a vertical rising and falling beam operated by the 65 rotation of said cam, a vertical beam connected to said rising and falling beam by a bell-lever, and links adapted to move horizontally, and a knife and pad connected with and adapted to move with said horizontally-moving beam, 70 said parts being combined substantially as described.

3. In a machine for staking and softening skins, a frame with driving shaft, a cam operated by rotation of said shaft, a rising and 75 falling beam actuated by rotation of said cam, a vertical beam connected by links and levers to said rising and falling beam and adapted to move horizontally, a vertical slide on said horizontally-moving beam, a cross-head connected to said slide and having an arm with 80 knife, and a swinging arm having a pad and linked to said cross-head, said parts being combined substantially as described.

4. A machine for staking and softening 85 skins, consisting of a driving-shaft, counter-shafts with a pinion spur-wheel, cam, and crank-wheel, respectively, thereon, sprocket-wheels on the driving-shaft and one of the counter-shafts, and an endless chain on said 90 wheels, a rising and falling beam, an advancing and returning beam, elbow-levers connected with said beams, a slide fitted on the second-named beam, a cross-head attached to said slide, a rising and falling carriage supporting said cross-head, a rod connected with 95 the aforementioned crank-wheel and said carriage, a knife attached to the cross-head, and a pad having its supporting arm mounted on a standard on the carriage and connected by a link 100 with said cross-head, the parts enumerated being combined substantially as described.

5. The combination of a frame, a horizontally-moving beam with a vertically-moving slide thereon, a cross-head connected to said 105 slide having an arm with knife, a standard secured to the frame, and a swinging arm pivoted to the standard and having a pad at its upper end and linked at its lower end to the cross-head, substantially as and for the purpose set 110 forth.

6. In a machine substantially as described, the carriage  $X$ , the cross-head  $W$ , the slide  $V$ , and beam  $P$ , in combination with the bolt  $V'$  and eye  $W'$ , which connects said head and 115 slide, substantially as described.

GEORGE V. ANDERSON.

Witnesses:

THOMAS REARDON,  
SAMUEL C. PEIRCE.