

A. HEDBAVNY & J. C. ROTHE.
MACHINE FOR UNHAIRING FUR.

(Application filed Apr. 27, 1898.)

(No Model.)

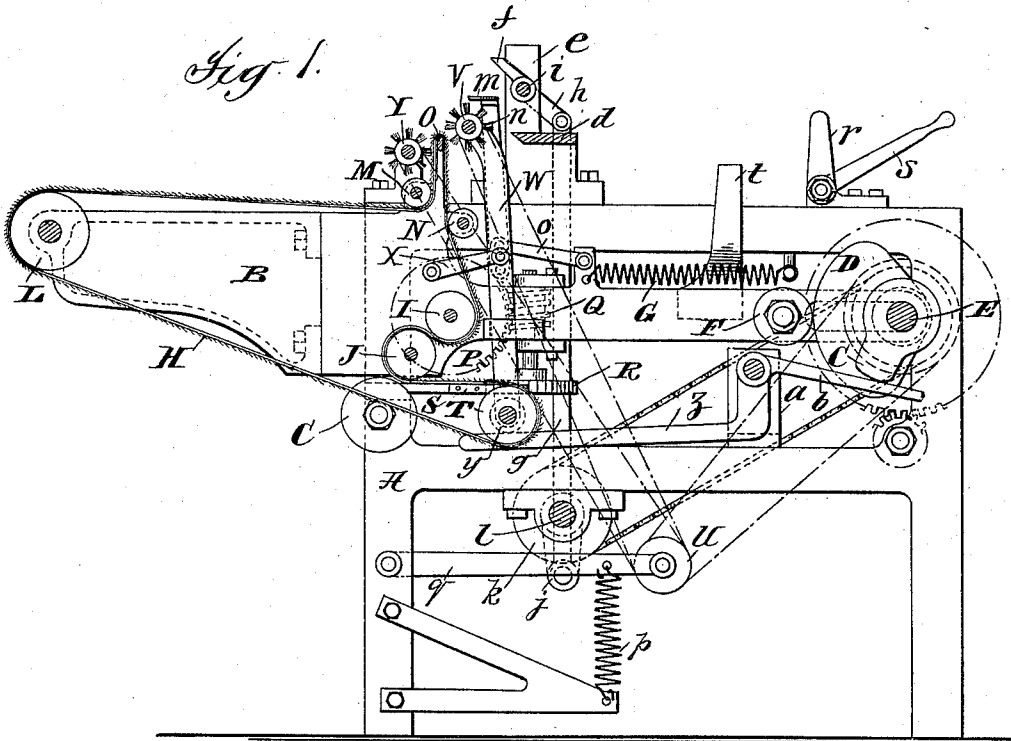
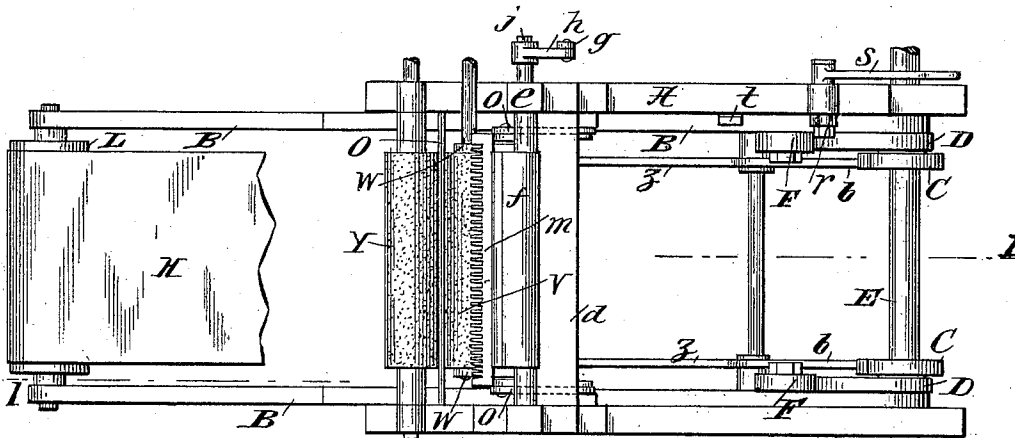


Fig. 2.



Witnesses:

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MACHINE FOR UNHAIRING FUR.

SPECIFICATION forming part of Letters Patent No. 652,182, dated June 19, 1900.

Application filed April 27, 1898. Serial No. 678,933. (No model.)

To all whom it may concern:

Be it known that we, ANTON HEDBAVNY, a resident of New York, in the county of New York, and JOHN C. ROTHE, a resident of New York, (Brooklyn,) in the county of Kings, State of New York, citizens of the United States, have invented certain new and useful Improvements in Machines for Unhairing Fur, of which the following is a specification.

10 This invention relates to improvements in machines for removing the stiff water-hairs from pelts, the object being to produce such a machine which will thoroughly remove the water-hairs in an expeditious manner without
15 danger of injuring the fur.

To this end our invention consists in the combination and arrangement of parts and the details of construction, all as hereinafter more fully described, and pointed out in the
20 claims.

In the drawings illustrating our invention, Figure 1 is a view, partly in section; and Fig. 2 is a top plan view.

25 Referring to the drawings, A is a frame of the machine, and B is a sliding bed which moves upon the rollers C. The bed is given a forward motion by a cam D, mounted on the driving-shaft E, acting upon the rollers F. Upon the rotation of the shaft E the bed
30 is forced forward by said cam D, and after the cam has passed its operative point the bed B is forced backwardly by the spring G. By these means the bed is given a forward-and-backward movement during every rotation of
35 the shaft E. The bed B carries with it the fur or pelt H, and during its reciprocating movements the fur is fed forward intermittently, as hereinafter described. The pelt is preferably fastened to an endless apron which
40 passes around the feed-roller I and the guide-rollers J, T, L, M, and N. Between the rollers M and N the pelt is fed over the knife-edged bar O, located upon the bed B. To the
45 feed-roller I is secured the gear-wheel P, which meshes with the vertical worm Q, also mounted in the sliding bed B. To the lower end of the shaft which carries the worm Q is fixed a ratchet-wheel R, and upon the frame A is
50 located the pawl S. After the bed B has been forced backward by the spring G to remove the water-hairs from a portion of the pelt, as

hereinafter described, and the cam D acts to force said sliding bed B in a forward direction the pawl S engages a tooth of the ratchet-wheel R, causing a slight rotation of the worm
55 Q, which in turn rotates the gear-wheel P, turning the feed-roller I, and thereby moving the pelt a short distance over the knife-edged bar O.

Y designates a stationary brush mounted
60 on the frame A, which is continuously rotated from left to right by the pulley U, which in turn is rotated by a pulley mounted upon the shaft E, as shown. V designates a brush upon the
65 opposite side of the knife-edged bar, which is continuously rotated from right to left by means of the pulley U. The object of these brushes Y and V is to brush down the soft fur, leaving the stiff water-hairs standing in
70 a substantially-vertical direction from the top of the knife-edged bar O in a manner well known. The brush V is mounted between two levers W, which are connected at about
75 their middles with the sliding bed B by means of the pivoted arms X. Between the lower ends of the levers W is located the roller T, which is in contact with the bell-crank levers
80 Z. These latter are pivoted upon the uprights a, located upon the frame A, as shown, and are provided with the rearwardly-extending
85 arms b. Upon the driving-shaft E is mounted a cam c, which is designed to raise the forward end of the bell-crank levers Z. After the cam c has passed from engagement with
90 the arm b the levers Z are depressed, and the levers W fall of their own weight, carrying the brush V, being guided in their descent by the short arms X and the movement of the
95 sliding bed B. This motion occurs during the backward movement of the sliding bed B, and when the levers W have reached their lowest
100 point the brush V assumes a position under the stationary knife d.

To the frame A is secured the uprights e, between which is pivoted the oscillating knife
95 f, which is given a partially rotary or oscillating movement by the link g, which is pivoted at its upper end to the crank h, connected with the shaft i, upon which the said oscillating knife is located. The lower end of the
100 link g is pivoted to the crank h, mounted on the shaft j, which is rotated by the pulley k,

connected by a belt with a suitable pulley mounted on the driving-shaft E. The knife *f*, in conjunction with the knife *d*, is designed to cut the stiff water-hairs from the fur when the latter is presented to them by the rearward motion of the sliding bed B.

In connection with this device may be used a guard-comb *m*, which is located at the top of the two levers *n*. This comb is designed to hold down the soft fur after it has been brushed by the brush V during the cutting operation. A downward and backward motion similar to that of the brush V is imparted to it by the levers Z, guided by the short lever *o*, pivoted to the sliding bed B, as shown. The spring *p* is designed to keep a tension on the arms *q*, which support the pulleys U during the descent of the brush V.

The operation of our device is as follows:

20 The pelt is basted upon the endless apron and rotated by hand until it reaches the knife-edged bar O, when the machine is started by the rotation of the driving-shaft E. The first result of the rotation of this shaft E is the

25 revolution of the brushes Y and V, which brush down the fur on both sides of the knife-edged bar. When the shaft E is rotated a sufficient distance, the cam D passes out of engagement with the roller F and the spring

30 G pulls the sliding bed B rearwardly until the knife-edged bar has moved away from the stationary brush Y into a position close to the stationary knife *d*. The guard-comb *m* is lowered rearwardly and presses downwardly

35 upon the fur which has been brushed by the brush V, holding it in position while the cutting operation is taking place. At the same time this is taking place the brush V is also lowered rearwardly until it passes out of the

40 way underneath the stationary knife *d*. During the movement above described the knife *f* is slowly rotating, and when the knife-edged bar reaches a position close to the stationary knife *d* the oscillating knife completes its motion and cuts off the water-hairs which have

45 been left standing during the brushing operation close to the skin. After this cutting operation is completed the cam D again engages the roller F and forces the sliding bed

50 B forwardly until it is again in contact with the stationary brush Y, and during this forward motion the pawl S acts upon the ratchet R, causing the worm Q and the gear P to rotate, feeding the pelt a slight distance to the

55 right. At the same time the guard-comb *m* is elevated to the position shown and the brush V is elevated forwardly into operative position, when the brushes Y and V, being continuously rotated, again resume the brushing operation. This operation is continued

60 until the pelt has been entirely "unhaired,"

it being fed forwardly a short distance at every reciprocation of the sliding bed B.

In order to stop the movement of the sliding bed B when necessary, we preferably provide a stop *r*, operated by the lever *s*, which is designed to throw said stop into engagement with the abutment *t*, located on the sliding bed B, as shown in Fig. 1.

By our device the fur is "parted" with great accuracy by the brushes, thus insuring the minimum of damage to the fur, and the machine operates with smoothness and rapidity, an object not successfully attained by those now in use.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a machine for removing the water-hairs from pelts, a sliding bed, a knife-edged bar carried thereon, a stationary rotary brush located at one side of the knife-edged bar, the cutting mechanism located on the other side thereof, and a movable rotating brush normally acting upon the fur between said fur and the cutting mechanism, and means for moving said brush out of the path of the knife-edged bar after the brushing operation, substantially as described.

2. In a machine for removing the water-hairs from pelts, a frame, a sliding bed carrying the pelt, and means for intermittently feeding it; a stationary rotating brush, a movable rotating brush, means for moving the latter into and out of operative position, and means for cutting the water-hairs, substantially as described.

3. The combination in a pelt-refining machine of a stationary frame, a stationary and a rotary knife mounted upon the stationary frame, and a movable frame set in the stationary frame, longitudinally movable therein, and containing a stretcher-bar, mechanism for feeding pelts over the stretcher-bar, means for separating water-hairs from the fur on the edge of the stretcher-bar and mechanism for moving the movable frame upon its supports longitudinally to and from the stationary and the rotary knife, of a stopper for limiting the motion of the movable frame, consisting of a shaft mounted in the stationary frame, cams keyed to the shaft in position to engage with the side parts of the movable frame and means for turning the shaft.

Signed by us this 26th day of April, 1898, at New York city, New York, aforesaid.

ANTON HEDBAVNY.
JOHN C. ROTHE.

Witnesses:

EUGENE V. MYERS,
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