

(No Model.)

2 Sheets—Sheet 1.

B. C. HASKELL.

MACHINE FOR COMBING FLEECE OR HAIR OF TANNED PELTS OR SKINS.

No. 566,454.

Patented Aug. 25, 1896.

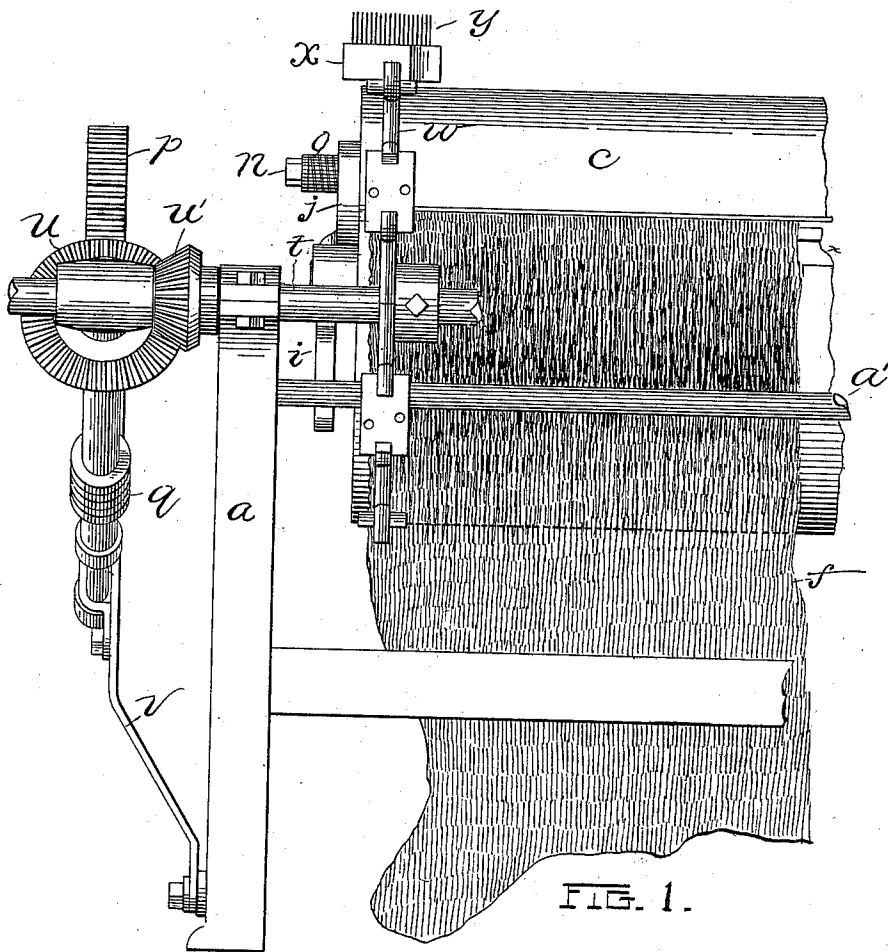


FIG. 1.

Witnesses.

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Inventor.

B. C. Haskell.
By *Arthur C. Crossley,*
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(No Model.)

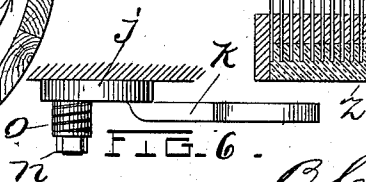
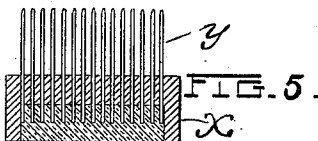
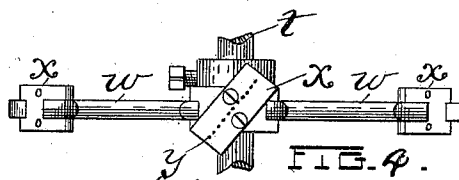
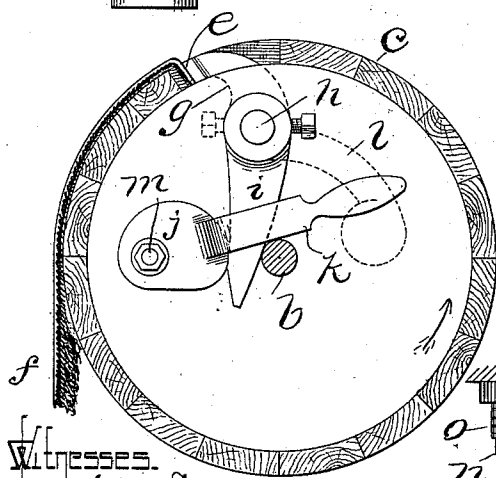
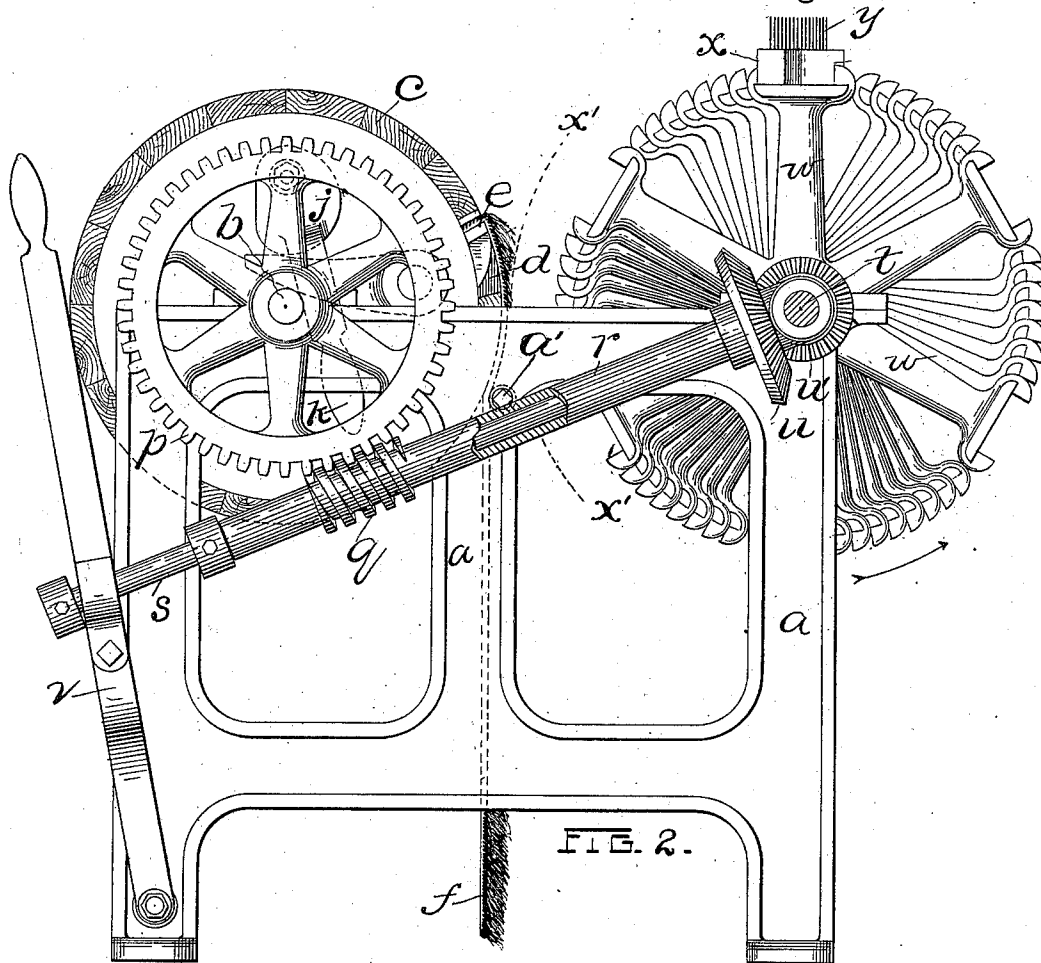
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Witnesses.
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Att'y.

UNITED STATES PATENT OFFICE.

BENJAMIN C. HASKELL, OF ARLINGTON, MASSACHUSETTS, ASSIGNOR TO THE ARLINGTON HEIGHTS MANUFACTURING COMPANY, OF SAME PLACE.

MACHINE FOR COMBING FLEECE OR HAIR OF TANNED PELTS OR SKINS.

SPECIFICATION forming part of Letters Patent No. 566,454, dated August 25, 1896.

Application filed August 6, 1895. Serial No. 558,449. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN C. HASKELL, of Arlington, in the county of Middlesex and State of Massachusetts, have invented certain
5 new and useful Improvements in Machines for Combing the Fleece or Hair of Tanned Pelts or Skins, of which the following is a specification.

This invention has relation to means for
10 combing the fleece, hair, or fur of pelts or hides tanned with the fleece or hair thereon. Heretofore it has been common in the preparation for use of tanned pelts or skins to employ a comb having long teeth arranged
15 in rows in a suitable back, which served also as a handle in its manual management. The teeth of this comb were thrust into the tangled or matted fleece or hair and the latter was, part by part, lifted up and combed out.
20 This mode of procedure is quite slow and laborious, and by reason of the great amount of time consumed is expensive.

It is the object of my invention to provide a machine for the performance of this work,
25 which machine shall not only accomplish much more expeditiously what has heretofore been done by hand, but do the work even more efficiently, and comb the pelt or skin more uniformly than can readily be done by
30 the hand method mentioned.

To these ends the invention consists of a pelt or skin combing machine embodying in its construction a movable holder and carrier for the pelt, and a rotary shaft in proximity
35 to the carrier provided with a plurality of spiders or arms on the outer ends of which are arranged combs placed at varying angles and constructed and arranged so as that
40 when the shaft with which they are connected is revolved the combs may successively enter the fleece or hair and thoroughly and uniformly comb and disentangle the same, all as I will now proceed to describe in detail,
45 and point out with particularity in the appended claims.

Reference is to be had to the annexed drawings and to the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features,
50 as the case may be, wherever they occur.

Of the drawings, in which are portrayed a

contrivance suitable for the embodiment of my invention, Figure 1 is a front view of so much of the machine as it is necessary to represent in order to explain the construction
55 and mode of operation of the invention. Fig. 2 is an end elevation of the same, a part being shown as broken out in order the better to show the construction. Fig. 3 is a sectional end view of the movable holder and
60 carrier, showing a way of connecting the pelt therewith. Fig. 4 is a detail view in plan, showing a way of providing the rotary shaft with comb-equipped spiders or arms. Fig. 5
65 is a sectional detail view showing a form in which the combs may be made. Fig. 6 is a sectional detail view showing a form of a portion of the means for connecting the pelt with the movable carrier and holder.

In the drawings, *a* designates a frame of
70 suitable construction and material, in which is journaled a shaft *b*, suitably supporting a cylinder or drum *c*, the circumferential part of which may be composed of wooden slats or boards, or of other suitable material.
75

In a groove or slot *d* formed in the drum there is arranged a movable clamping-slat *e*, between which and the opposing edge or wall of the slot the edge of a pelt or skin *f* may be secured. I have shown a suitable form of
80 means for acting in conjunction with the slat *e* for the purpose last mentioned, the same consisting of fingers *g*, adapted to act upon the slat *e*, and secured to a rock-rod *h*, journaled in the heads of the drum. The tail-
85 pieces *i* of one or more of the said fingers are adapted to be acted upon by the cam *j* of a lever *k*, suitably pivoted upon the drum. The rock-rod *h* is provided with weighted
90 arms *l*, (shown in dotted lines in Fig. 3,) which operate to move the fingers *g* normally back from the slat *e*, as will be readily understood.

The cam *j* is pivoted or fulcrumed on the stud *m*, and between the nut *n* on the outer
95 end of said stud and the outer face of the cam is a spring *o*, which acts against the cam *j* to hold it frictionally against the side of the drum and so help to maintain the lever and cam in any position in which it may be moved.
100

On the shaft *b* is a worm-gear *p*, which is engaged by a worm *q* on a rotary sleeve *r*,

supported on an inclined rod or shaft *s*, the upper end of which is supported on the rotary shaft *t*. A bevel-gear *u* on the upper end of the sleeve *r* is engaged by a like gear *u'* on the shaft *t*, so that a comparatively rapid rotation of the shaft *s* will impart a slower motion to the drum *c*.

The lower end of the rod or shaft *s* is supported loosely in a bearing in a lever *v*, pivoted at its lower end on the frame, so that by the movement of the said lever the shaft may be raised to bring the worm *q* into engagement with the worm-wheel *p* to operate the drum or lower the said shaft to stop the motion of the drum.

On the shaft *t* there are secured a plurality of spiders or radiating arms *w*, to the outer ends of which are attached combs consisting of a lag or backing-piece *x*, in which are set teeth *y*, secured in place by solder *z* or other suitable means. The teeth of the said combs may be composed of metal and are sufficiently long to enable them to take into the fleece, hair, or fur of the pelt or skin and lift the same up and comb the mats and tangles, so that it may appear straight and fluffy.

The combs are arranged on the ends of the spider-arms so that the lines of the teeth will extend at a suitable angle to the line or path of movement of the combs in order that the teeth may operate successively and not simultaneously on the fleece or hair. The angle at which the teeth are set in their backs and in which the rows of teeth are arranged with respect to the line of movement of the combs depends upon the character of the material to be operated upon. The spiders are arranged on the shaft *t* in such manner that the combs will appear in "staggered" ranks, or so that the combs will operate successively on the material. It will be observed that the ends of the arms *w* are arranged in a line at an angle to the path of rotation and that the line of the teeth of the combs are in lines at an angle to the first-said line, as shown in Figs. 2 and 4. This is done so that the ends of the combs will not coincide, but each will have an independent action upon the hair of the pelt.

The pelt or skin is arranged in position on the drum, as shown in Fig. 3, so that the drum in its rotation in the direction of the arrow in the said last-mentioned figure will carry the skin around to the position shown in Figs. 1 and 2, the guide bar or rod *a'*, which is a very important feature of the invention, serving to keep the pelt from flapping about and in position on the drum, so that the teeth *y*, moving in the path indicated by the dotted line *x' x'* in Fig. 2, will properly act upon the hair or fleece, and, were it not for the guide rod or bar *a'*, as the machine is herein shown to be equipped, the teeth of the combs would catch into the skin of the pelt and tear it into shreds or would not act at all in the desired manner. But a single spider-arm is shown

in the drawings as equipped with a comb, the latter being for the sake of clearness omitted from the other arms.

I do not confine my invention to use for combing fleece, fur, or hair on skins, since it is obvious that it may be employed for the purpose of combing hair or fibers separated from the skin or other substance and properly supported upon a carrier like the cylinder *c*, and the cylinder may be provided with a number of slots and slats and clamping means around its circumference for this purpose.

I do not of course confine myself to the exact form and arrangement of parts herein shown when the invention is embodied in a contrivance of the character described, since these may be changed or varied to a considerable degree within the skill of the mechanic without departing from the nature or spirit of the invention.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, it is declared that what is claimed is—

1. A machine for combing the fleece, hair, or fur of tanned pelts, comprising in its construction, a movable carrier consisting of a drum for supporting the pelts and presenting it to the action of the combs, a rotary shaft provided with a plurality of spiders or radial arms having a staggered arrangement, each of the radial arms being equipped with a comb.

2. A machine for combing the fleece, fur, or hair of tanned pelts, comprising in its construction, a drum for supporting the pelt and presenting it to the action of the combs, a rotary shaft provided with a plurality of spiders or radial arms, the arms being staggered and having their ends arranged in a line at an angle to the path of rotation; and combs on said spiders, the said combs being arranged at an angle to the axis of the said rotary shaft and also at an angle to the said line, whereby each comb has an independent action on the pelt.

3. A machine for combing the fleece, fur, or hair of tanned pelts, comprising in its construction a movable carrier, consisting of a drum for supporting the pelt and presenting it to the action of the combs, a rotary shaft provided with a plurality of spiders or radial arms, each equipped with a comb, and a guide rod or bar *a'* for maintaining the pelt in proper position on the carrier-cylinder.

4. A machine for combing the fleece, fur or hair of tanned pelts, comprising in its construction a movable carrier consisting of a drum for supporting the pelt and presenting it to the action of the combs, a rotary shaft provided with a plurality of spiders or radial arms each equipped with a comb, the combs having a staggered arrangement whereby they may act successively upon the hair of the

pelt and a guide bar or rod *a'* for maintaining the pelt in proper position on the carrier-cylinder.

5 A machine for combing the fleece, fur, or hair of tanned pelts, comprising in its construction, a movable carrier consisting of a drum for supporting the pelt and presenting it to the action of the combs, a worm-wheel on the axis of said drum for rotating it, a rotary shaft provided with a plurality of spiders
10 or radial arms each equipped with a comb, the combs having a staggered arrangement whereby they may act successively on the hair of the pelts, a bevel-wheel on said

rotary shaft and a rotary sleeve provided with a worm and a bevel-wheel for connecting the said worm-wheel and the aforesaid bevel-wheel whereby the rotation of the first said rotary shaft causes the rotation of the drum. 15

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 20th day of February, A. D. 1895. 20

BENJAMIN C. HASKELL.

Witnesses:

ARTHUR W. CROSSLEY,
C. C. STECHER.