(No Model.)

I. DRESDNER.

FUR PLUCKING MACHINE.

No. 493,017. Patented Mar. 7, 1893.

Fig. 1.

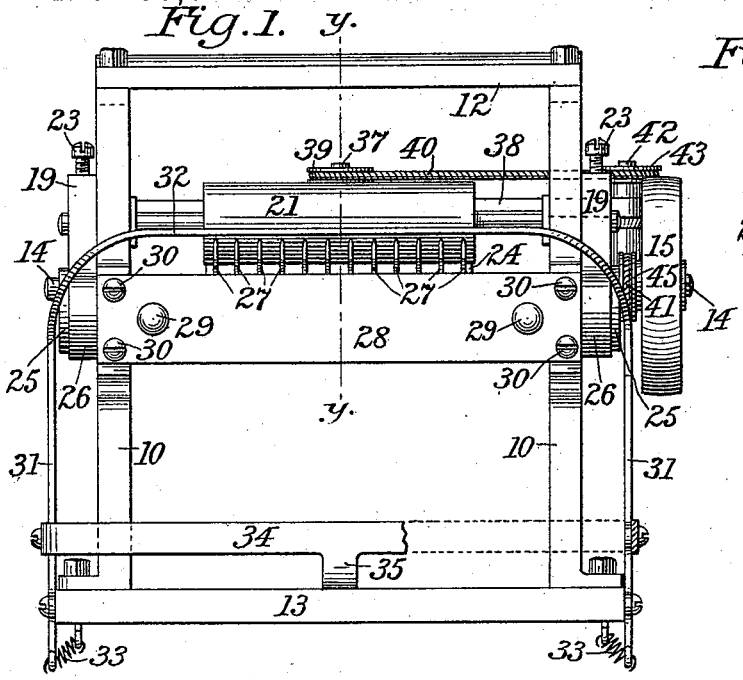


Fig. 3.

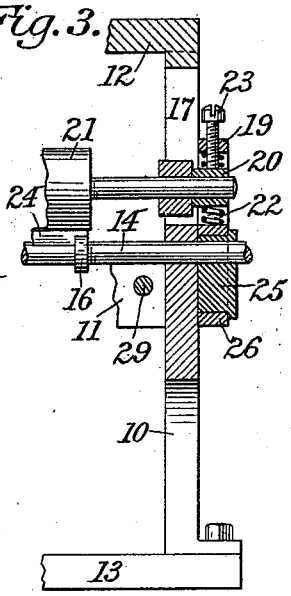
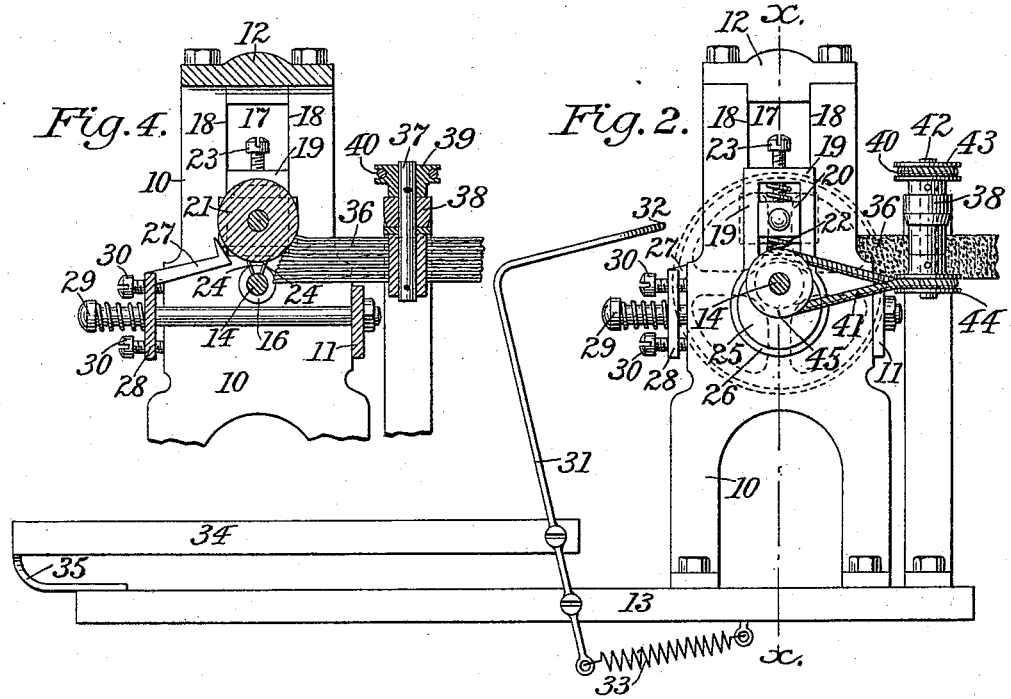


Fig. 4.

Fig. 2.



Attest:

A. N. Jesbera.

A. Hidder.

Inventor:

Isidor Dresdner

by William B. Greeley

Atty.

UNITED STATES PATENT OFFICE.

ISIDOR DRESDNER, OF BROOKLYN, NEW YORK.

FUR-PLUCKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 493,017, dated March 7, 1893.

Application filed September 22, 1892. Serial No. 446,581. (No model.)

To all whom it may concern:

Be it known that I, ISIDOR DRESDNER, a resident of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Fur-Plucking Machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the figures of reference marked thereon, making a part of this specification.

In plucking furs by machines, rather than by hand, as usual, it has been found impracticable to make the action of the machine continuous, such as would be produced, for example, by smooth plucking rollers rotating always in contact. Rather is it necessary that the action of the machine should be intermittent in order to permit the operator to handle the skin properly. It has been sought generally to secure this intermittent action by vibrating nipper jaws and in one case by a rotary plucking machine which consists essentially of a roller formed of radial blades carried upon a shaft, the blades being set at such a distance apart that no two blades shall at the same time act upon the hairs to be plucked. By these means the action of the blades is caused to be intermittent and the fur is released entirely between the action of two successive blades. This machine operated satisfactorily upon some kinds of fur but on other kinds the hairs to be plucked are so delicate that they are blown back by the current of air produced by the blades, or are caused to curl by the constant friction, with the result that the pelt is only partially plucked.

It is the object of my present invention to produce a machine of the rotary type which is especially adapted for operating upon furs of the character just referred to and which shall operate in such a manner as not to blow back or curl the fine hairs but shall pluck the pelt completely at a single operation. I employ a continuously driven roller as before, but in place of a roller with a circumferential series of radial blades I use a roller which may have one or, at the most, two blades and I mount the co-operating roller in movable bearings so that it may be reciprocated toward and from the other roller.

In the accompanying drawings: Figure 1 is a front elevation of the improved machine. Fig. 2 is a side elevation of the same with the main shaft in section and the driving wheel indicated in dotted lines. Fig. 3 is a partial longitudinal section on the line x—x of Fig. 2, and Fig. 4 is a partial transverse section on the line y—y of Fig. 1.

The frame of the machine may be of any suitable construction and comprises standards 10, 10, and cross-bars 11, 12. The standards 10, 10, are adapted to be secured to a suitable table 13. In fixed bearings in the standards is supported to rotate freely a shaft 14 which may have attached a driving pulley 15 or other means for rotating it, and also carries a roller 16. Above the shaft 14 the standards are slotted as at 17 and form ways 18 to receive and guide the frames 19 which are movable on said ways. These frames 19 support the bearing boxes 20 for a co-operating roller 21, of some such material as rubber, and in order that this roller may be made adjustable with reference to the roller 16, and in order to regulate the contact between the two rollers and to take up wear, springs 22 are interposed between the lower ends of the frames and the boxes, and screws 23 are tapped into the other ends of the frame to bear upon the boxes and to adjust their position by compressing the springs more or less. The roller 16 may be formed in any way to adapt it to the particular work to be performed, but I prefer to construct it as represented in the drawings, wherein one or two blades 24 are secured to the shaft 14. It is necessary, as stated above, that the action of the roller should be intermittent, that it should be quick, and that the hairs should be in the proper position relative to the two rollers. In order to secure these desirable results, without encountering the evils alluded to, I cause the co-operating roller to be reciprocated bodily toward and from the continuously rotating roller 16. Therefore I fix upon the shaft 14 eccentrics 25, 25, and I connect the straps 26 of these eccentrics to the frames 19 which support the co-operating roller, so that as the shaft 14 is rotated it will, at each rotation, move the roller 21 toward and from the roller 16, whereby, when the edges of the blades 24 meet the roller 21, the hairs of the pelt lie over them in such position as to be plucked

out by the continued forward rotation of the two rollers. In front of the bite of the rollers I support a comb, consisting of teeth 27 fixed to a plate 28. The comb is made adjustable toward and from the rollers by bolts 29, 30, in an ordinary manner.

To support the pelt in front of the comb and rollers I employ a rod 31 which is bent substantially in U-shape and then is bent again at about right angles as shown so that the two members may be pivoted to the table 13 and the transverse part 32 of the rod be brought about in line with the bite of the rollers. Springs 33 may be attached to the rod and the table so as to keep the transverse part of the rod normally from the comb while a U-shaped body-frame 34 may be provided with a finger 35 to rest and slide upon the table so that its upper portion may be pressed forward by the body of the operator.

In order to free the roller 21 and the blades 24 from the hairs which cling to them after being plucked out, I place in the rear of the plucking devices a rotary brush 36, the bristles of which sweep the roller and the blades. This brush may be mounted and driven in any desired manner but I have shown it as mounted upon a shaft 37 which has a bearing in a cross-bar 38. Above the bar 38 the shaft is provided with a pulley 39 which is driven by a convenient arrangement of bands 40, 41, and intermediate shaft 42, having pulleys 43, 44, from a pulley 45 on the shaft 14.

In Fig. 4 of the drawings the bristles of the brush are represented as broken off at the right, and at the left as somewhat shorter than they are in practice, in order to save room on the drawings and to prevent confusion with the lines indicating the blades 24. In practice the brush sweeps substantially the whole length of the roller and blades, although as shown it would sweep somewhat less than the full length.

In the operation of the machine a pelt is thrown over the transverse portion 32 of the rod 31 and is held thereon by the operator with both hands. By a forward movement of the body of the operator against the body-frame 34 the pelt is then thrown forward so that the long hairs shall project through the comb and toward the bite of the rollers. As the shaft 14 is rotated the blades of the roller 16 will raise the hairs and immediately thereafter the roller 21 will descend and cause such hairs to be firmly grasped between itself and the blades and to be quickly plucked out by the continued rotation of the two rollers together. At once the roller 21 will rise into position for another action and the pelt will be shifted by the operator.

It is obvious that if desired the positions of the rollers might be reversed and the bladed roller might be reciprocated, but I prefer the action of the arrangement shown.

I claim as my invention—

1. In a fur-plucking machine, the combination of a bladed roller, a second roller to co-operate with said first named roller, means to rotate one of said rollers, and means to reciprocate one of said rollers toward and from the other, substantially as shown and described.

2. In a fur-plucking machine, the combination of a bladed roller, means to rotate it, eccentrics carried by the shaft of said roller, a roller to co-operate with said bladed roller, and sliding boxes for said co-operating roller adapted to be reciprocated by said eccentrics, substantially as shown and described.

3. In a fur-plucking machine, the combination of a pelt-supporting device, a continuously rotating roller, a co-operating roller mounted in movable bearings, means to reciprocate said roller bodily, and a comb interposed between the pelt-supporting device and the bite of said rolls, substantially as shown and described.

4. In a fur-plucking machine, the combination of a bladed roller, a second roller to co-operate with said first named roller, means to rotate one of said rollers, means to reciprocate one of said rollers toward and from the other, and a brush to free said rollers from the clinging hairs, substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ISIDOR DRESDNER.

Witnesses:
A. N. JESBERA,
A. WIDDER.