

(No Model.)

2 Sheets—Sheet 1.

F. HOSCH.

MACHINE FOR CLEANING FUR ROBES.

No. 257,707.

Patented May 9, 1882.

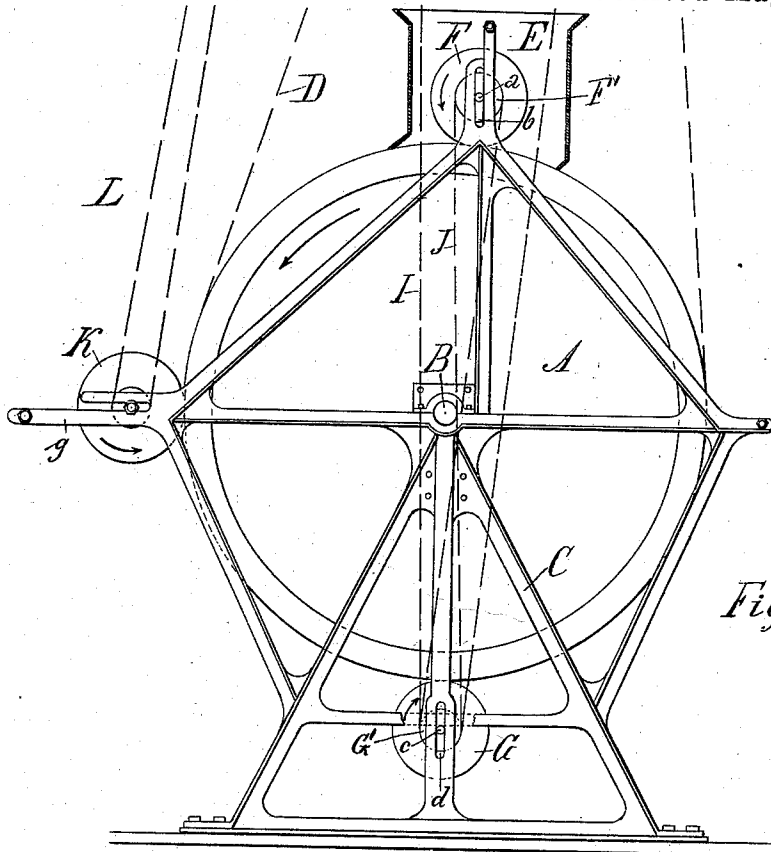


Fig. 1.

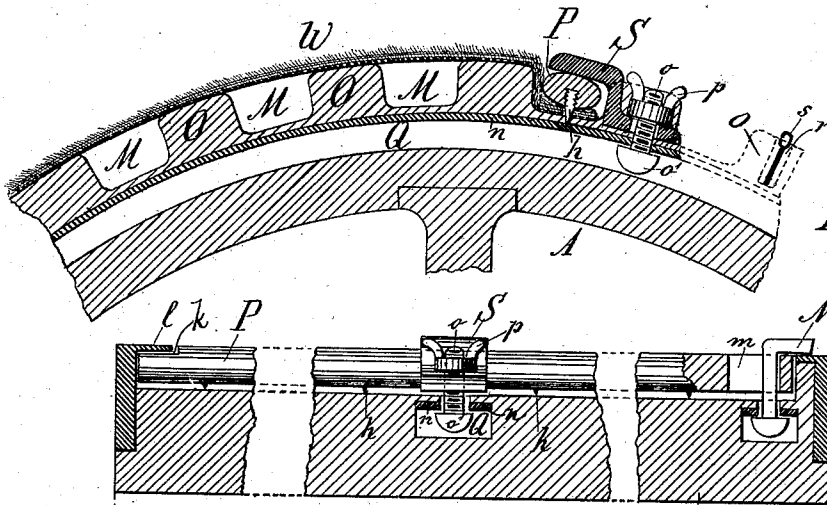


Fig. 2.

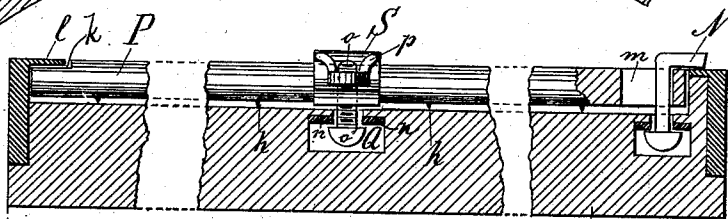


Fig. 3.

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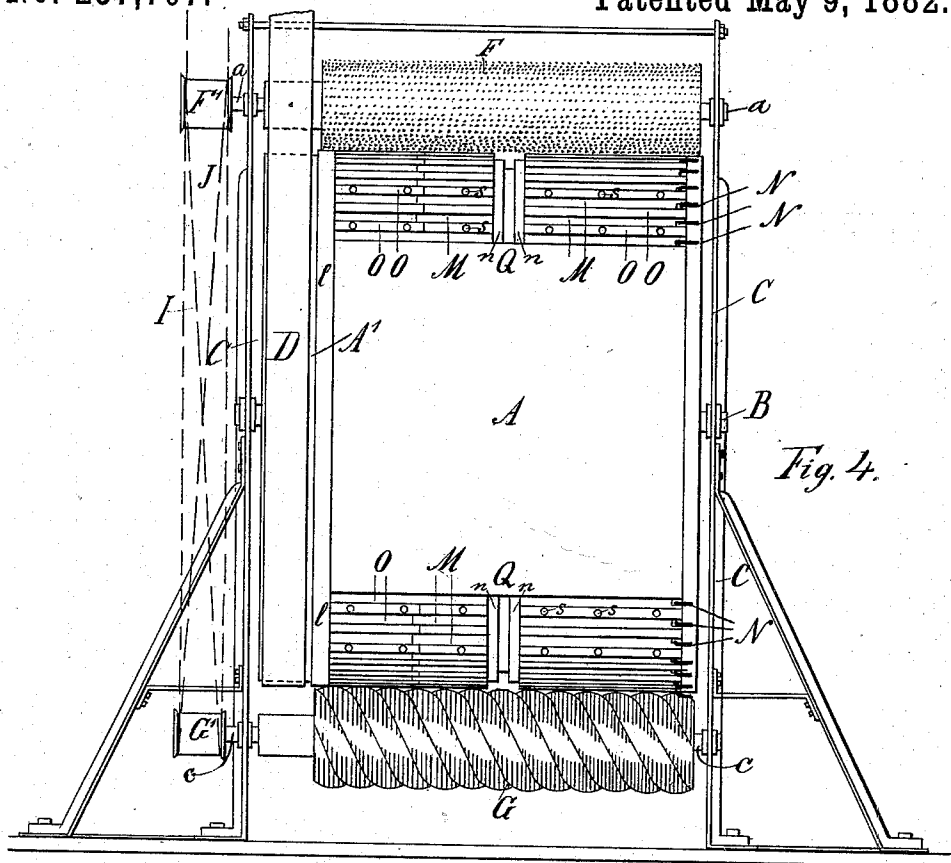


Fig. 4.

Fig. 5.

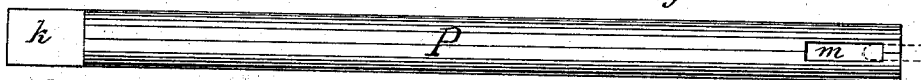


Fig. 6.

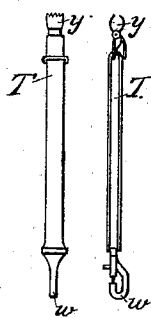
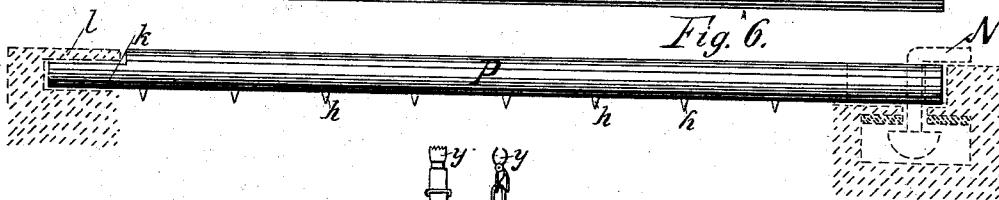


Fig. 7.

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# UNITED STATES PATENT OFFICE.

FERDINAND HOSCH, OF BROOKLYN, NEW YORK.

## MACHINE FOR CLEANING FUR ROBES.

SPECIFICATION forming part of Letters Patent No. 257,707, dated May 9, 1882.

Application filed February 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND HOSCH, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Machine for Cleaning Fur Robes, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved machine for thoroughly cleaning fur robes very rapidly and at a small expense.

The invention consists in a rotating drum or cylinder on which the robes are held by means of suitable devices, on which drum a series of brushes revolve, one of which is contained in a box filled with sand and sawdust, which are rubbed into the fur by the brush in the sand-box and are brushed out again by the other brushes, whereby the fur robe will be thoroughly cleaned.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is an end elevation of my improved fur-robe-cleaning machine, parts being shown in section. Fig. 2 is a cross-sectional elevation of parts of the drum or cylinder, showing the manner of holding the robe. Fig. 3 is a longitudinal sectional elevation of the same. Fig. 4 is a front elevation of my improved fur-cleaning machine, parts being removed. Fig. 5 is a longitudinal plan view of the rail or bar used to hold the robe on the drum or cylinder. Fig. 6 is a longitudinal side elevation of the same. Fig. 7 is a longitudinal front and side elevation of the straps for holding short robes on the drum.

A hollow drum or cylinder, A, made of wood or metal, is provided with a central shaft, B, which is journaled in two frames or standards, C, of wood or metal.

A large belt-pulley, A', for a driving-belt, D, is made integral with the drum A, as shown in Fig. 4.

A longitudinal box, E, open at the bottom, is held directly above the drum A by the frames C, this box E extending along the entire length of the drum and containing a cylindrical beating-brush, F, resting on the drum A. The ends of the shaft a of this brush pass through vertical slots b in the frames C to permit an

automatic vertical adjustment of the brush according to the thickness of the robe.

A cylindrical combing-brush, G, with the bristles arranged in spiral rows, is mounted in the frames C below the drum or cylinder A, and the ends of the shaft c of this brush G pass through vertical slots d in the frames C.

A belt-pulley, G', is mounted on one end of the shaft c of the brush G, and a belt-pulley, F', is mounted on the end of the shaft a of the brush F.

A belt, I, passes over the pulley G', and a crossed belt, J, passes over the pulleys F' and G', as shown in Figs. 1 and 4.

A cylindrical combing-brush, K, provided with a belt-pulley, rests on longitudinally-slotted horizontal arms g of the frames C and rests against the drum or cylinder A. A belt, L, is used to rotate this brush K.

Diametrically opposite each other the drum A is provided with a series of longitudinal grooves, M, in its surface, which grooves are separated by ridges or tongues O.

The grooves M are adapted to receive a robe-holding bar or rail, P, which is provided on its under side with a series of studs or pins, h. One end of this rail or bar P is provided with a rabbet, k, to adapt this end of the bar or rail to be passed under a raised band, l, at the end of the cylinder or drum. The opposite end of the rail P is provided with a longitudinal slot, m, through which one of a series of swiveled angular keys, N, are passed at the edge of the drum opposite the edge provided with the raised band l.

A groove, Q, extends transversely across the ridges or tongues O, and a short distance below the bottoms of the grooves M, as shown in Fig. 2. Two plates, n, project from the sides of this groove Q, directly below the bottoms of the grooves M, and these plates form a slot at or near the middle of the depth of the groove Q.

A clamp, S, rests on the plates n, and can be locked on the same by means of a screw, o, passing through the base of the clamp, and provided with a winged nut, p. The head o' of the screw o is below the plates n in the groove Q, so that this clamp can be moved longitudinally in the groove Q.

Some of the tongues O are provided with

recesses *r*, containing staples, loops, or rings *s*, which are about flush with the upper edges of the tongue, or project but slightly. On these loops or rings *s* the snap-hooks *w* catch, which are attached to straps or heavy elastic bands T, provided at the opposite ends with spring-clamps *y*, for holding the ends of short or irregular robes.

The operation is as follows: The fur robe W which is to be cleaned is secured on the drum A in some suitable manner, as will be described hereinafter, with the fur on the outside. The cylinder or drum A rotates about forty times in a minute. The brush or beater F rotates in the same direction as the drum E, and thus brushes against the robe fastened on the drum. This brush makes three hundred revolutions per minute. The box E is filled with sand and sawdust or like material, which is rubbed in and against the fur by the brush or beater F. The cylindrical comb or brush K has the same diameter and rapidity of rotation as the brush or beater F, and removes the greater part of the sawdust and sand which have been beaten and brushed into the fur by the beater or brush F.

The brush G has the same diameter as the brushes F and K, but makes five hundred revolutions per minute and rotates contrary to the cylinder or drum A. It finishes the robe perfectly, as it brushes the hairs down as they naturally grow. The sand and sawdust box E can be dispensed with, if desired, and the brushes only used in cleaning the robes; but that depends entirely on the condition and class of the robe.

The robe is held on the drum in different ways, according to the size of the same. If a large robe is to be held on the drum or cylinder, one end of the robe is placed over one of the grooves and is forced into this groove by means of the spiked bar or rail P, which is held in place at the ends by the rabbet *k*, band *l*, and the swiveled key N, and at the middle by the sliding clamp S, which can be adjusted to hold the bar or rail P in any one of the grooves M on one section of grooves M and tongues O. The other end of the robe is held in the same manner by a rail or bar, P, in the opposite section of grooves M and tongues O. Thereby the robe will be stretched and held taut on the drum.

If the robe is short, small, or irregular, one end can be secured by means of a rail or bar, P, and the other end is held by the spring-clamps *y y* of straps or elastic bands, T, the snap-hooks *w* of which are hooked on the eyes or loops *s* of the tongues O; or both ends of the robe can be held by means of the straps or elastic bands T.

As the cylinder or drum A is hollow, it can be used to soften and clean furs by placing them into the drum, as has been customary heretofore.

Any kind of furs, robes, &c., can be thoroughly cleaned in a very short time by means

of my improved machine without injuring the fur in any manner whatever.

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

1. In a machine for cleaning fur robes, the combination, with a revolving drum to which the robes are to be secured, of a brush resting on the drum and contained in a longitudinal box adapted to receive sawdust, sand, and like material; and of a series of brushes for combing and smoothing the fur and removing the sand and sawdust that have been brushed or beaten into it to clean it, substantially as herein shown and described, and for the purpose set forth.

2. In a machine for cleaning fur robes, the combination, with the revolving drum A, of the brush F, on the top of the drum A, the sand-box E, surrounding the brush F; the brush K at the side of the drum A, and the brush G at the bottom of the drum A, substantially as herein shown and described, and for the purpose set forth.

3. In a machine for cleaning fur robes, the drum A, having longitudinal grooves M, combined with a bar or rail, P, and devices for securing the ends of a rail or bar, P, for holding the ends of the robes in the grooves, substantially as herein shown and described, and for the purpose set forth.

4. In a machine for cleaning fur robes, the drum A, constructed with longitudinal grooves M, a raised band, *l*, at one edge of the drum, and swiveled keys at the ends of the grooves M, substantially as herein shown and described, and for the purpose set forth.

5. In a machine for cleaning fur robes, the combination, with the drum A, provided with a series of grooves, M, and a transverse groove, Q, of an adjustable clamp, S, and a bar or rail, P, fitting in the grooves M and adapted to hold the end of the robe, substantially as herein shown and described, and for the purpose set forth.

6. In a machine for cleaning fur robes, the combination, with a drum, A, provided with longitudinal grooves M and a transverse groove, Q, of plates *n*, projecting from the sides of the grooves Q, the bar or rail P, fitting in the grooves M, the sliding clamp S in the groove Q, and the screw *o* and winged nut *p* for locking the clamp S in the desired position, substantially as herein shown and described, and for the purpose set forth.

7. In a machine for cleaning fur robes, the combination, with the drum A, provided with a series of longitudinal grooves, M, of a bar or rail, P, fitting in the grooves M, and provided on its under side with a series of studs or spikes, *h*, substantially as herein shown and described, and for the purpose set forth.

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Witnesses:

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