EMMA HOUGH.

HAIR-HEADING MACHINE.

No. 170,951. Patented Dec. 14, 1875.

Fig: 1

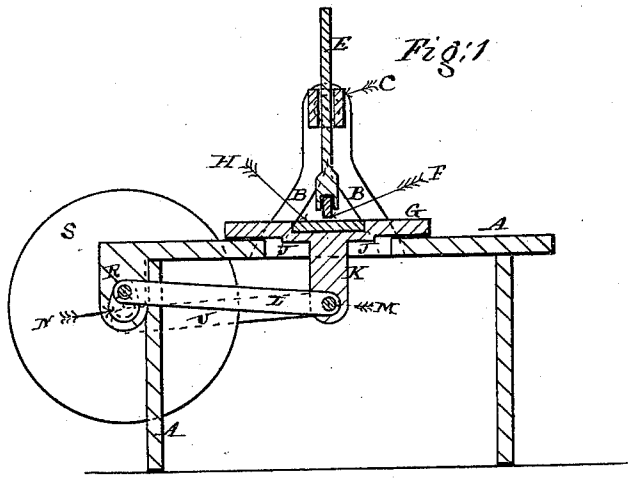


Fig: 2.

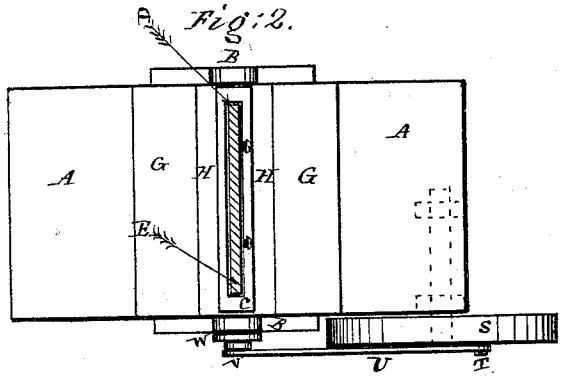


Fig: 3.

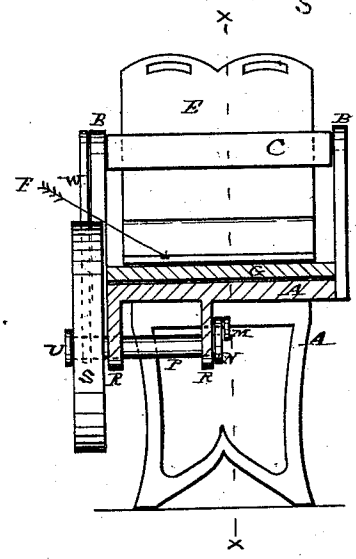
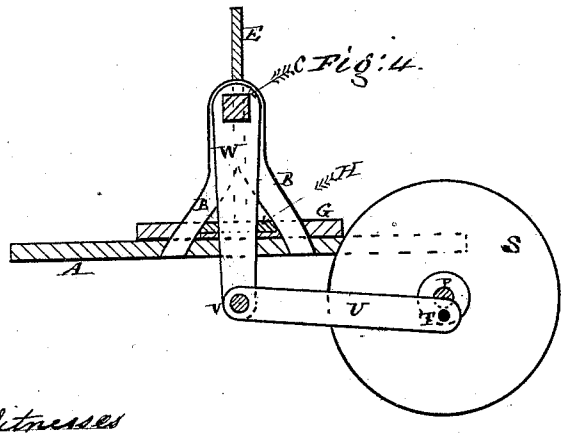


Fig: 4.



Witnesses
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UNITED STATES PATENT OFFICE.

EMMA HOUGH, OF BROOKLYN, E. D., NEW YORK.

IMPROVEMENT IN HAIR-HEADING MACHINES.

Specification forming part of Letters Patent No. **170,951**, dated December 14, 1875; application filed June 3, 1875.

To all whom it may concern:

Be it known that I, EMMA HOUGH, of Brooklyn, E. D., Kings county, State of New York, have invented certain Improvements in Machines for Heading Hair, of which the following is a specification:

The objects of my invention are to sort the hair by arranging it uniformly, with the heads or roots all at one end, so as to have their natural order as cut from the original wearer, and to improve the machine for a like purpose invented by me, and patented December 2, 1873; and the nature of my improvements consists, first, in combining with the vibrating heading-rubber plate a heading-rubber composed of elastic india-rubber or elastic rubber of similar elastic properties; second, in combining with the frame of the machine a vibrating bed having a facing of elastic india-rubber, or other elastic material suitable for such purposes, and giving to the bed an opposite vibratory and simultaneous motion to that of the heading-rubber plate; and, third, in the combination of the vibrating-rubber plate with the vibrating rubber bed, having a simultaneous and opposite vibratory motion to that of the lower end of the vibratory rubber plate. But to describe my improvements more particularly I will refer to the accompanying drawings, forming a part of this specification, the same letters of reference, wherever they occur, referring to like parts.

Figure 1 is a vertical cut sectional view, taken through the line *x x*, Fig. 3. Fig. 2 is a plan view. Fig. 3 is an end elevation. Fig. 4 is a detached side view of the propelling-wheel and levers for vibrating the rubber plate.

Letter A is the frame of the machine, which may be made of wood or metal, as desired. At about the middle of the frame are elevated at each side of it standards B, in the upper ends of which a rock-shaft, C, is supported on suitable bearings. Lengthwise of this rock-shaft, to the width of the bed of the machine, is cut a slot, D. In this slot is inserted loosely a heading-rubber plate, E, made of metal, to give it the necessary weight to press on the hair to "head" it, or may be weighted by means of a spring or springs, if made of wood, to effect the like elastic pressure upon the hair. To more effectually accomplish the heading of the hair than shown in my patent of December 2, 1873, the lower edge of the vibrating plate is shod with a strip of thick elastic india-rubber, F, or other elastic material having similar elastic properties, whether of leather, rawhide, or prepared felt cloth. This vibrating rubber plate acts upon the hair arranged upon a vibratory bed, G, having an elastic india-rubber rubbing-surface, H, secured thereto. To permit the bed to have a vibratory motion, a section of the table-board of the frame, as shown at J, Fig. 1, is cut out, thus leaving space for the vibration of the bed, while at the same time affording a level and solid support for it to vibrate on. For the purpose of vibrating the bed a shank, K, is solidly attached to its lower side, and, by means of a connecting-rod, L, linked thereto by the center-pin M, and at its opposite end to the crank N on the main driving-shaft P, a vibratory motion is given to the bed as the driving-shaft is rotated. Letters R are the driving-shaft hangers, and S is a propelling-wheel. To the outer face of the propelling-wheel is linked, by a center-pin, T, at one end, a connecting-rod, U, having its opposite end linked by a center-pin, V, to the lower end of a lever, W, secured at its upper end solidly to the outer end of the rock-shaft C.

By this connection with the main driving-shaft, it will readily be seen that, as it rotates, a vibratory motion will be given to the heading-rubber plate, while, by the set of the throw of the crank N, an opposite vibratory motion will be given to the bed, and thus, by their simultaneous action upon the hair or other bearded animal fiber, readily separate each hair from the other, and push the roots or heads out in opposite directions.

It will be obvious that any of the usual treadle motions or motive powers may be applied to operate the machine, and therefore do not limit my improvements to the precise arrangement of crank-wheel shown in the drawing.

Having now described my invention, I will set forth what I claim and desire to secure by Letters Patent of the United States:

1. The combination of the elastic hair-heading rubber F described with the lower edge

of the vibrating plate E, as and for the purposes set forth.

2. The combination of the vibrating bed G, having an elastic face, H, with the table-board of the frame A, shank K, connecting-rod L, crank N, and shaft P, substantially as described.

3. The combination of the vibratory plate E with the vibrating rubber bed G, said bed having a simultaneous and opposite vibratory motion to that of the lower end of the vibratory plate C by means of the cranks N and T on the shaft P, arranged to operate in the manner and for the purposes substantially as described.

EMMA HOUGH.

Witnesses:
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