J. H. LaBau.

Brushing & Finishing Hats.

No. 173

31177 Fig. 1.

Patented Jan. 22, 1861.

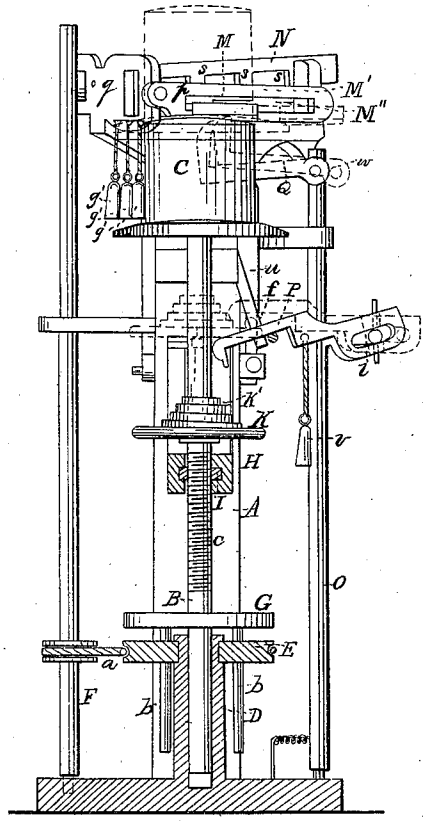


Fig. 2.

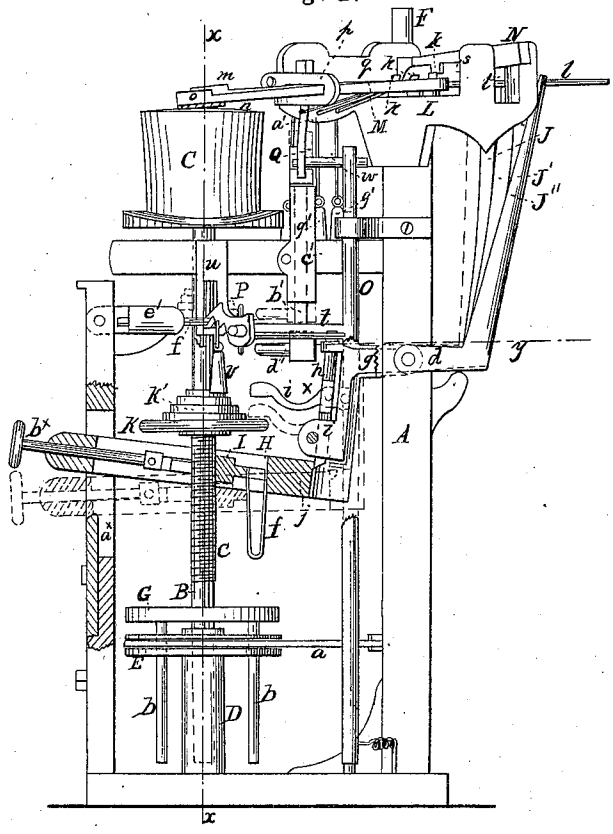


Fig. 3.

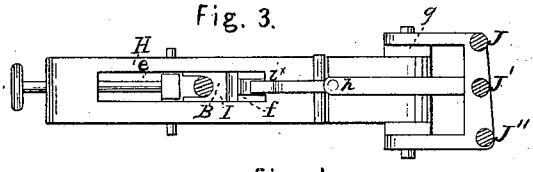


Fig. 4.

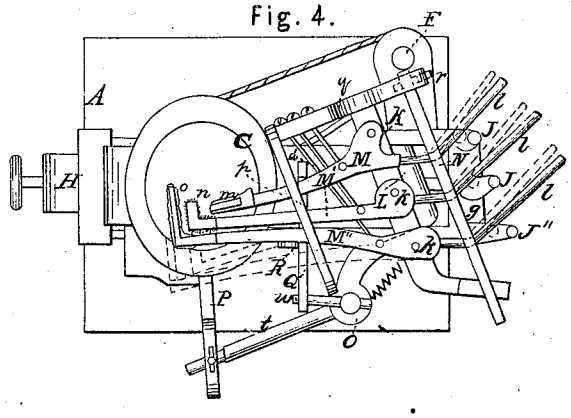
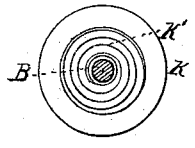


Fig. 5.



Witnesses.

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J. H. LA BAU, OF NEW YORK, N. Y.

MACHINE FOR FINISHING HATS.

Specification of Letters Patent No. 31,177, dated January 22, 1861.

To all whom it may concern:

Be it known that I, J. H. LA BAU, of the city, county, and State of New York, have invented a new and useful Machine for Finishing Hats, which I term an "Automatic Hat-Finisher;" and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a vertical section of my invention taken in the line x, x, Fig. 2; Fig. 2, a side sectional view of the same; Fig. 3, a horizontal section of the same, taken in the line y, y, Fig. 2; Fig. 4, a plan or top view of the same; Fig. 5, a detached plan of the fusee wheel pertaining to the same.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to obtain a machine by which silk or fur hats may be finished—that is to say, sponged brushed and ironed automatically, the whole mechanism necessary to perform the work being put in motion by the rotation of a single shaft.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents an upright framing in which a vertical shaft B, is placed having on its upper end a hat block C, of usual construction. The lower part of the shaft B, is fitted in a socket D, and is allowed to rise and fall therein. On the upper part of the socket there is placed loosely a horizontal pulley E, which is driven by a belt a, from a vertical driving shaft F, and on the shaft B, just above the socket D, there is secured a circular disk G, which has two pendent pins b, b, attached, said pins projecting down through the loose pulley E, on the socket D. The lower part of the shaft B, has a screw thread on it.

H, is a bar of bent or right angular form which is secured in the frame A, by a fulcrum pin d. The lower part of this bar H, is slotted longitudinally as shown at e and a semi-nut I, is fitted in said slot, said nut having a spring f, bearing against its outer end, which spring has a tendency to keep the nut I, engaged with the screw c, on the shaft B, as shown clearly in Fig. 2.

J, J′, J″, represent three upright arms which have an oblique position relatively with the framing A, as shown in Figs. 2, 3, and 4. These arms are connected at their lower ends at right angles to a base g, and this base works on the pin d, of the bar H. The front end of the base g, has a slide h, connected to it, and this slide extends down through a guide i, which is fitted in the bar H. A lever $i^{\times}$, passes through the slide h, and projects some distance out in front of it and the lower end of slide h, during a portion of the operation of the machine, extends down behind a step j, in the bar H, see Fig. 2.

On the shaft B, above the bar H, there is placed a circular disk K, having secured to its upper surface a projection K′, of fusee form as shown in Figs. 1, 2 and 5.

On the upper part of the framing A, there is placed an oblique bar L, to which three levers M, M′, M″, are secured by fulcrum pins k. The back ends of these levers have curved rods l attached and to the front end of lever M, a heater or iron m, is attached a brush n, being attached to lever M′, and a sponge o, to lever M″. The levers M, M′, M″, pass through a guide p, which is connected by a pivot to a bar q, and to this bar q, there is attached by a pivot r, a bar N, which is provided with pendent projections s, which when the levers M, M′, M″, are first set ready for use rest on their rods l, and keep the heater, brush and sponge elevated above the block C.

O, represents an upright shaft which is placed in the framing A, and has an arm t, projecting from it at right angles. On the outer end of this arm a rod P, is fitted loosely said rod projecting through a guide u, and having a weight v, attached to it see more particularly Figs. 1 and 2. The upper end of the shaft O, has an arm w, attached which arm is connected to a horizontal slide Q, having an upright projection a', at its end. The slide Q, rests in a fork R, which is at the upper end of a rod b', said rod being fitted in a vertical socket c', and having an arm d', attached to its lower end.

In the upper part of the framing A, there is placed a swinging bar e', through which a rod f', passes which rod supports the rod P, as the shaft B, rises.

Each of the levers M, M′, M″, has a weight g', attached.

The operation is as follows: The hat body to be operated upon is placed on the block C, and the outer part of the bar H, is elevated by pressing back nut I, by means of

a rod b^x, and adjusted up underneath the disk K, as shown in Fig. 2. This adjustment of the bar H, throws the levers M, M′, M″, inward so that the heater *m*, brush *n*, and sponge *o*, will be over the top of the crown of the hat on block C, and the bar N, is dropped down so that the projections *s*, will rest on the rods *l*, and keep the heater brush and sponge elevated. The shaft F, is then rotated by any convenient power and the screw *c*, on rod B, in connection with the nut I, in bar H, will draw the lower part of bar H, downward, the shaft B, being rotated through the medium of the belt *a*, pulley E, and the disk G, with pendants *b*, *b*. This movement of the bar H, draws the arms J, J′, J″, inward toward the bar L, and said arms against the rods *l* and move the levers M, M′, M″, outward so that the heater *m*, brush *n*, and sponge *o*, pass over the top of the hat and finish the same, each lever dropping as it passes from underneath its projection, *s*. When this operation is effected the bar H, will have reached a step a^x, in the framing and the shaft B, still rotating, and bar H, being now stationary the nut I, causes the shaft B, to ascend as it rotates and the heater, brush and sponge acts upon or against the side of the hat, the weight *g*′, keeping the tools aforesaid in contact with their work. When the shaft B, has reached the termination of its upward movement the side of the hat will have been fully acted upon and the disk K, will have raised the slide *h*, and relieved the base *g*, of the arms J, J′, J″, from the bar H, and the slide Q, will also have been raised in consequence of the disk K, acting against the arm *d*′, of the rod *b*′. This elevation of the slide Q, causes the projection *a*′, to extend up behind the lever M. The disk K, also as it ascends raises the bar *e*′, and the rod *f*′, of the latter is moved from underneath the rod P, and when the shaft B, has reached its highest point the end of rod P, rests on the upper part of the fusee-shaped projection K′, and the shaft B, still rotating the projection K′, gradually moves out the rod P, and thereby turns the shaft O, which actuates the slide Q, and causes the projection *a*′, to draw out the heater *m*, brush *n*, and sponge *o*, so that the latter will act upon and finish the brim of the hat and the operation is completed. The operator then presses back the nut I, and elevates the bar H, as before for a succeeding operation.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. The levers M, M′, M″, with the heater *m*, brush *n*, and sponge *o*, respectively attached, the arms J, J′, J″, screw shaft B, provided with the hat block C, and the bar H, provided with the nut I, arranged for joint operation substantially as and for the purpose set forth.

2. The fusee-shaped projection K′, on the disk K, rod P, connected with the shaft O, and the slide Q, also connected to said shaft and provided with the upright projection *a*′, the above parts being arranged substantially as shown to cause the heater, brush, and sponge to pass over and act upon the brim of the hat as set forth.

3. The arrangement, when used in connection with the parts above named, of the pulley E, and disk G, the former being fitted loosely on the socket D, and the latter provided with the pendants *b*, *b*, which pass through the pulley substantially as described, whereby the shaft B, may be rotated and allowed to rise as it rotates for the purpose specified.

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Witnesses:
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M. M. LIVINGSTON.