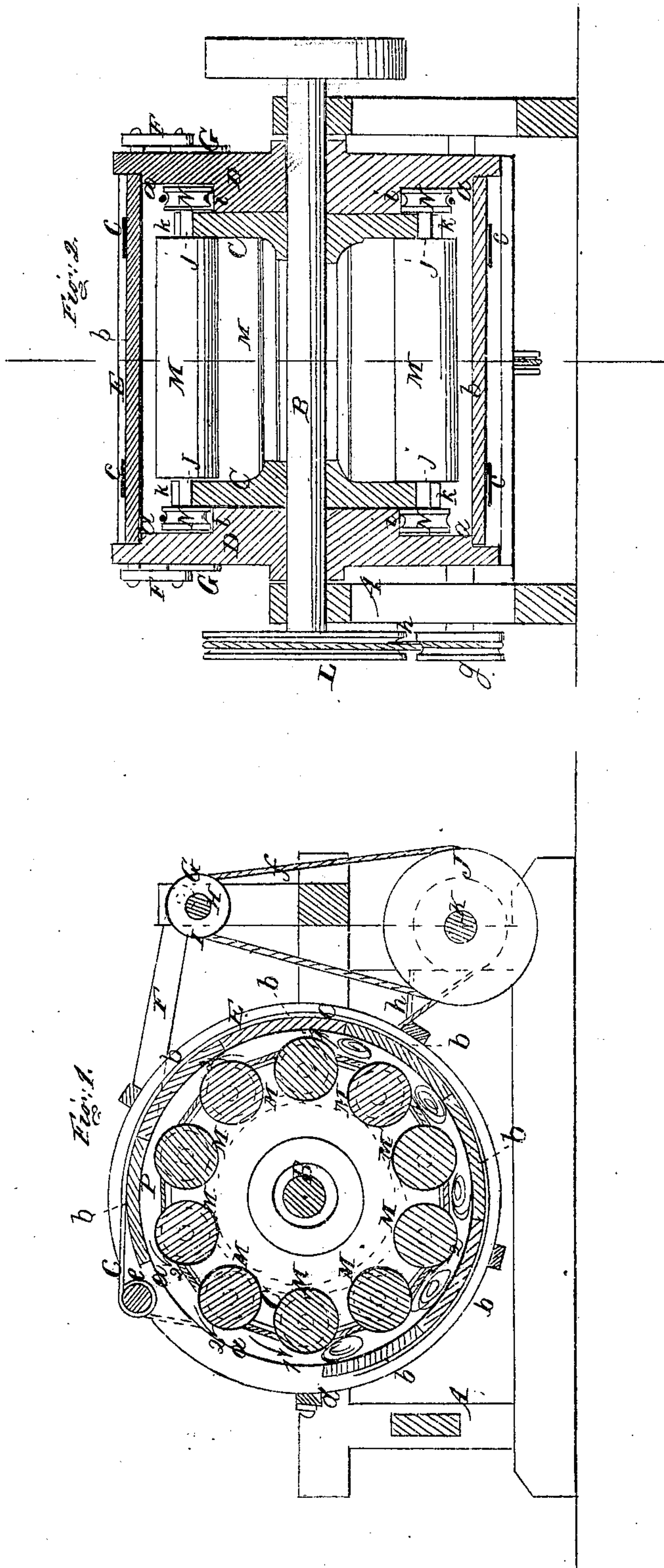


J. S. Taylor.
Felting Machine.

No. 14,845.

Patented May 6, 1856.



UNITED STATES PATENT OFFICE.

JAS. S. TAYLOR, OF DANBURY, CONNECTICUT.

MACHINERY FOR FELTING HAT-BODIES.

Specification of Letters Patent No. 14,845, dated May 6, 1856.

To all whom it may concern:

Be it known that I, JAMES S. TAYLOR, of Danbury, in the county of Fairfield and State of Connecticut, have invented certain
5 new and useful Improvements in Machinery for Felting Hat-Bodies; 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
10 part of this specification, in which—

Figure 1, is a longitudinal vertical section of my improvement, (x) (x) Fig. 2 showing the plane of section. Fig. 2, is a transverse vertical section of ditto, (y) (y) Fig. 1 showing the plane of section.

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

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

A represents a rectangular framing, on which a shaft B is placed, said shaft having two circular heads G, G, attached permanently to it.

25 D, D, are two circular heads or plates, which are placed loosely on the shaft B and at the outer sides of the heads C, C, see Fig. 2. The inner surfaces of the heads or plates D, D, have each a circular ledge (a) upon
30 them upon which ledges the ends of an elastic rubber or bed E rest, said rubber or bed being formed of strips (b) attached to elastic bands (c) (c) one end of the band being secured to a bar (b) attached to the
35 peripheries of the bands or plates D, D, and the other ends secured to a roller (e) the bearings of which are also attached to the peripheries of the heads or plates D, D, a short distance above the bar (d) the rubber
40 or bed extending nearly the whole distance around the circular ledges (a) (a) as shown in Fig. 1.

The heads or plates D, D, have rods or bars F, F, attached to their upper parts,
45 one to each head or plate, and the outer ends of the rods or bars are connected to crank wheels G, G, which are placed on the ends of a shaft H on the framing A. This shaft has a pulley I upon it at about its
50 center and a belt (f) passes around said pulley, and also around a pulley J, on a shaft K, at the lower part of the framing A. The shaft K, has a pulley (g,) at one end, around which pulley a belt (h) passes, said
55 belt also passing around a pulley L at one end of the shaft B.

On the inner surfaces of the circular heads or plates D, D, there are circular ledges (i) (i) one on each, and M represents a series of rollers which have a wheel N at each end
60 of their axes (j) said wheels bearing upon the peripheries of the ledges (i) (i) and having a band O, passing around them. The axis (j) of the rollers pass through slots or recesses (k) in the peripheries of the circular heads C, C. The rollers M extend
65 across the space between the heads C, C, and form a cylinder of rollers as plainly shown in Fig. 1, a space P being allowed between the rollers and rubber or bed. 70

Operation: The hat bodies shown in red, and designated by Q are properly moistened and rolled up, and placed in the space P, and motion being given the cylinder of rollers in the direction indicated by the arrow 1
75 Fig. 1, the hat bodies will be carried around between the series of rollers, and the rubber on bed E and discharged at (a') the bed having a vibratory motion given it by the rods or bars F, F, and the rollers M rotating
80 on their axles in the direction indicated by the arrows 2, in consequence of the wheels N, bearing upon the ledges (i) (i). The hat bodies will consequently be subjected to the necessary rubbing and rolling. The rollers
85 M, turning in the direction as shown, insuring the rotation of the articles in the space P and thereby causing the articles to be perfectly felted.

I am aware that vibrating rubbers or beds
90 and series of rollers, have been previously used for the same purpose, but they have failed to operate perfectly in consequence of the rollers not having a positive motion. The motion of the rollers being imparted to
95 them in consequence of the article being felted, pressing or bearing against them, the rollers therefore moved down in a reverse direction to that shown in my machine, and did not turn or rotate the articles during the
100 process of felting, in fact the reverse was the case, the articles were forced through or around the space P, without being turned themselves, but turning the rollers.

I am also aware that rollers having a posi-
105 tive motion have been used but not in connection with a vibratory bed or rubber (E) or at least not in any such relative arrangement therewith, for joint coöperation in the manner specified, as is here so advantageously and simply the case for the manu-
110 facture of felt hats.

I do not claim of itself as new a vibratory bed or rubber operating in connection with rollers for felting hat bodies, nor yet, merely of itself, as new, rollers having a positive motion or reverse action for various rubbing and other purposes, as such are old and common to felting and other machines, but

What I do claim as new and useful in machinery for felting hat bodies, and desire to secure by Letters Patent, is—

The vibrating rubber or bed (E) in combination with the rollers (M) having a

positive movement or rotation on their own axis given them in a direction causing the outer points of their peripheries to travel in the direction of their general travel as acquired by the rotation of the central shaft (B) as specified, when the same are arranged for operation together as herein set forth for the purposes described.

JAMES S. TAYLOR.

Witnesses:

LYMAN D. BREWSTER,
ROGER AVERILL.