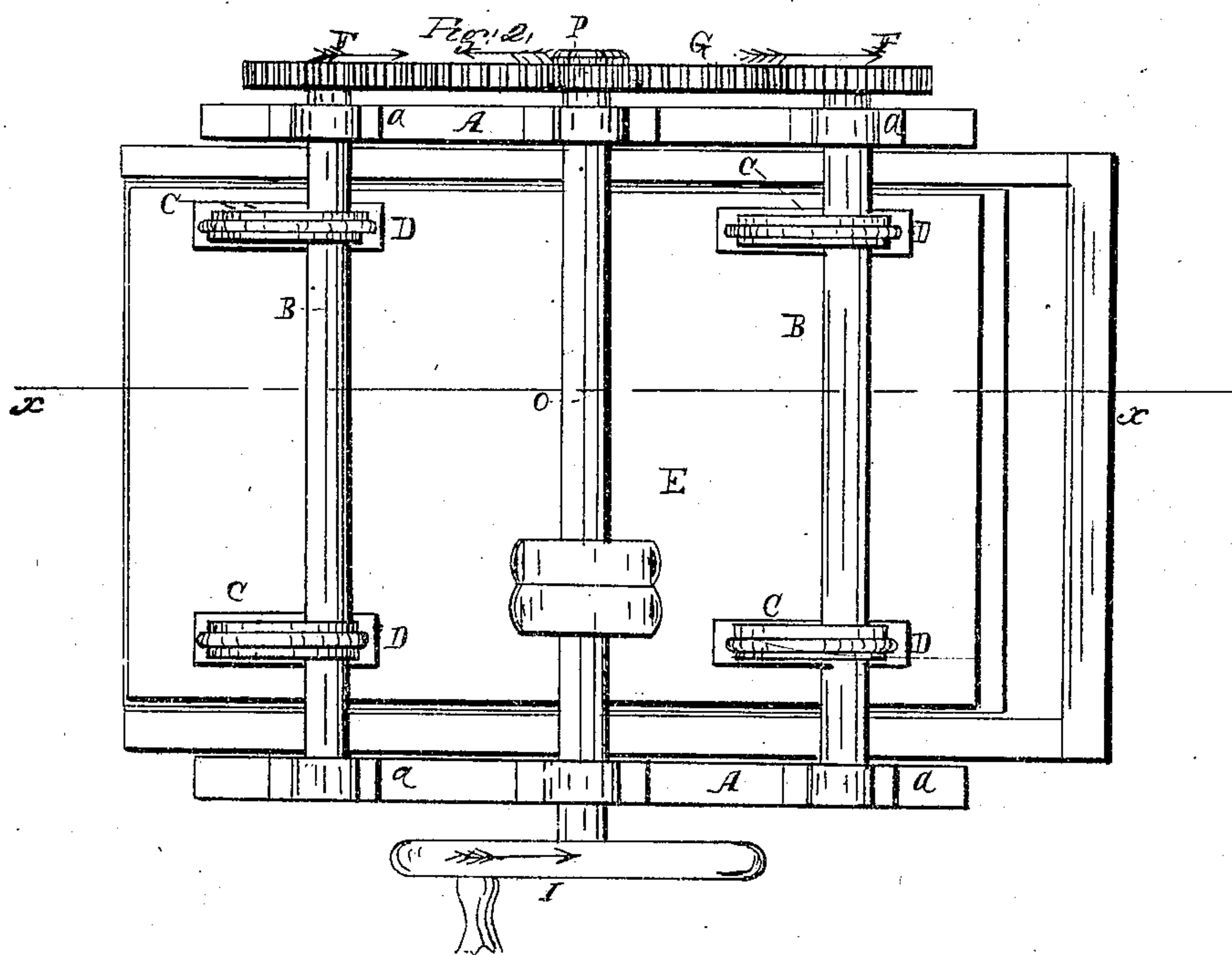
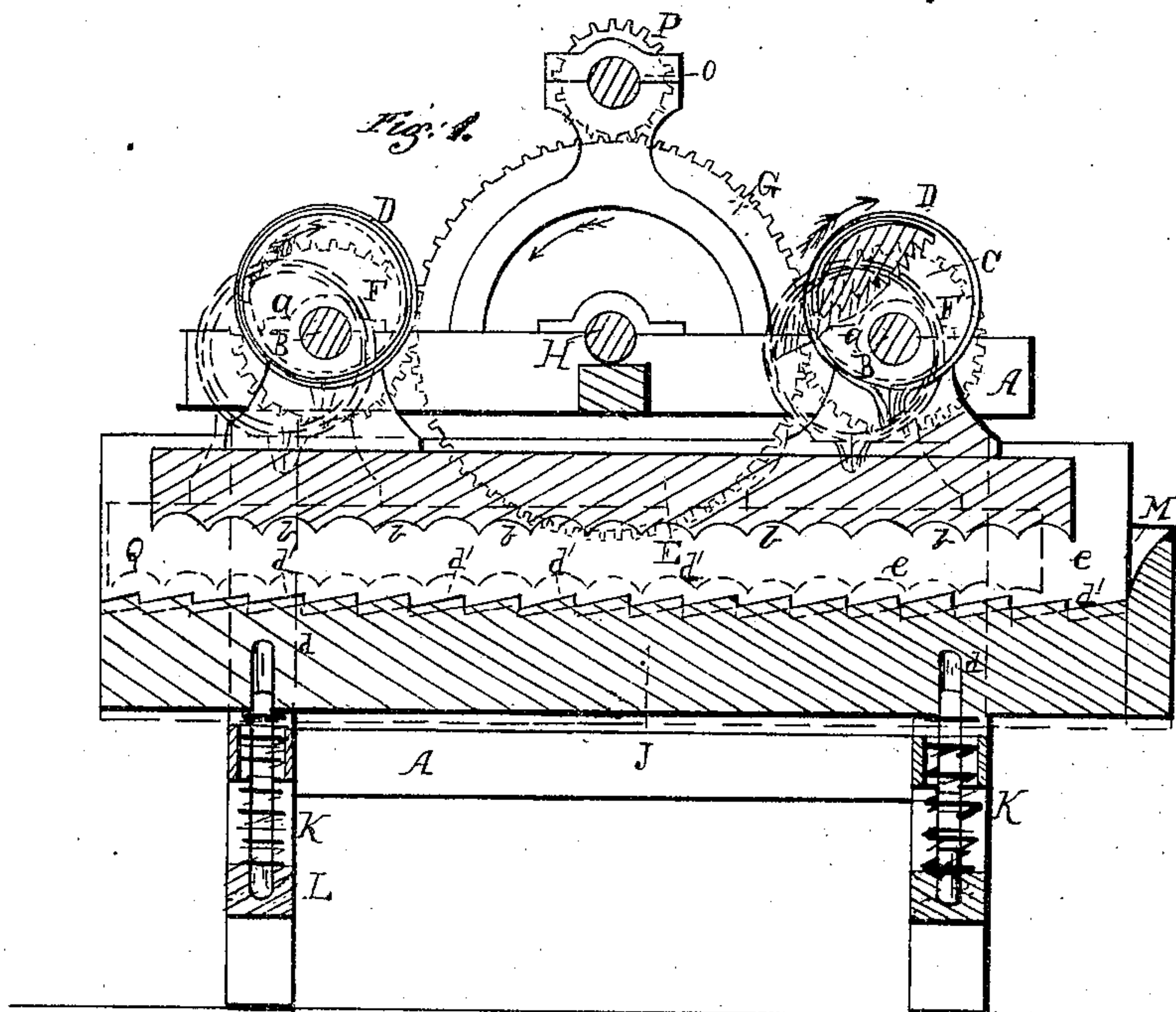


Middlebrook. Blakslee & Blakslee.
Felting Machine.

No. 12,321.

Patented Jan. 30. 1855.



UNITED STATES PATENT OFFICE.

S. S. MIDDLEBROOK, J. B. BLAKSLEE, AND C. F. BLAKSLEE, OF NEWTOWN, CONNECTICUT.

MACHINERY FOR FELTING HAT-BODIES.

Specification of Letters Patent No. 12,321, dated January 30, 1855.

To all whom it may concern:

Be it known that we, SIDNEY S. MIDDLEBROOK, JAMES B. BLAKSLEE, and CHARLES F. BLAKSLEE, of Newtown, in the county of Fairfield and State of Connecticut, have invented a new and Improved Machine for Felting Hat-Bodies; and we 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 longitudinal vertical section of our improved machine, the plane of section being through the center, as indicated by the line (x) (x), Fig. 2. Fig. 2, is a plan or top view of ditto.

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

This invention relates to a new and improved machine for felting hat bodies, and consists in placing the hat bodies between two corrugated beds or plates, one of which has an up and down and also a lateral movement, the other being stationary with the exception of a certain yielding or elastic movement, by which the hat bodies are subjected to a requisite pressure and to a rolling motion similar to that formerly given them by hand, and are perfectly felted.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

A, represents a rectangular frame having two transverse shafts B, B, on its upper part which work in suitable bearings (a). Each shaft B, has two eccentrics C, C, upon it near its ends, the eccentrics being encompassed by bands or clasps D, the lower parts of which are secured to the upper surface of a horizontal bed or plate E, which fits within the frame A. The under surface of the bed or plate E, is corrugated, the corrugations being formed by transverse furrows or concaves (b) as shown in Fig. 1. At one end of the shafts B, B, there are secured toothed wheels F, F, one on each shaft, and these wheels gear into a larger wheel G, hung upon one end of a shaft H, the wheel G, being between the two wheels F, F. Above the shaft H, there is a shaft O, having a pinion P, at one end which gears into the wheel G, and a crank pulley I, at its opposite end.

J, is a bed or plate placed within the frame A, and directly underneath the bed or plate E. The bed or plate J, rests upon

spiral springs K, K, a proper number being used. The springs K, are placed around rods L, the lower ends of which are secured to cross pieces (c) (c) to the frame A, the upper ends working in holes (d) (d) in the bed or plate J, see Fig. 1. The upper surface of the bed or plate J, is corrugated, the corrugations being formed by transverse inclined planes or step like projections (d') as shown in Fig. 1.

The hat bodies designated by (e) Fig. 1, are rolled up, a proper number together, and placed between the beds or plates E, J, at one end designated by M, Fig. 1, and motion being given the crank pulley I, the upper bed or plate E, by means of the eccentrics C, moves up and down, and also laterally and gives a rolling motion to the hat bodies which are consequently forced along between the two beds or plates E, J, and out at the discharge end Q. The red lines in Fig. 1, show the bed or plate when depressed, and also the extent of the yielding of the bed or plate J. The lower bed or plate J, yields in consequence of the springs K, and the two beds or plates are sufficiently near together to give the required pressure to the hat bodies. The inclined planes or step like projections (d') prevent the hat bodies from being moved too quickly between the beds or plates.

The hat bodies are subjected to the same motion as that formerly given them by the hands before machines were invented, viz, a rolling motion under a requisite pressure, and are felted in a perfect manner.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent, is—

The employment or use of the two beds or plates E, J, corrugated on their inner surfaces substantially as shown; the upper bed or plate E, having an up and down and also a lateral vibratory movement, given it by the cams C, or their equivalents, and the lower bed J, being elastic or yielding, for the purpose of subjecting hat bodies to a rolling motion under a requisite pressure and thereby thoroughly felting the same as herein described.

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Witnesses:

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SAMUEL B. PECK.