

Barnes & Blakslee.

Felling Machine.

N^o 16823

Patented Mar. 17, 1857.

Fig. 1.

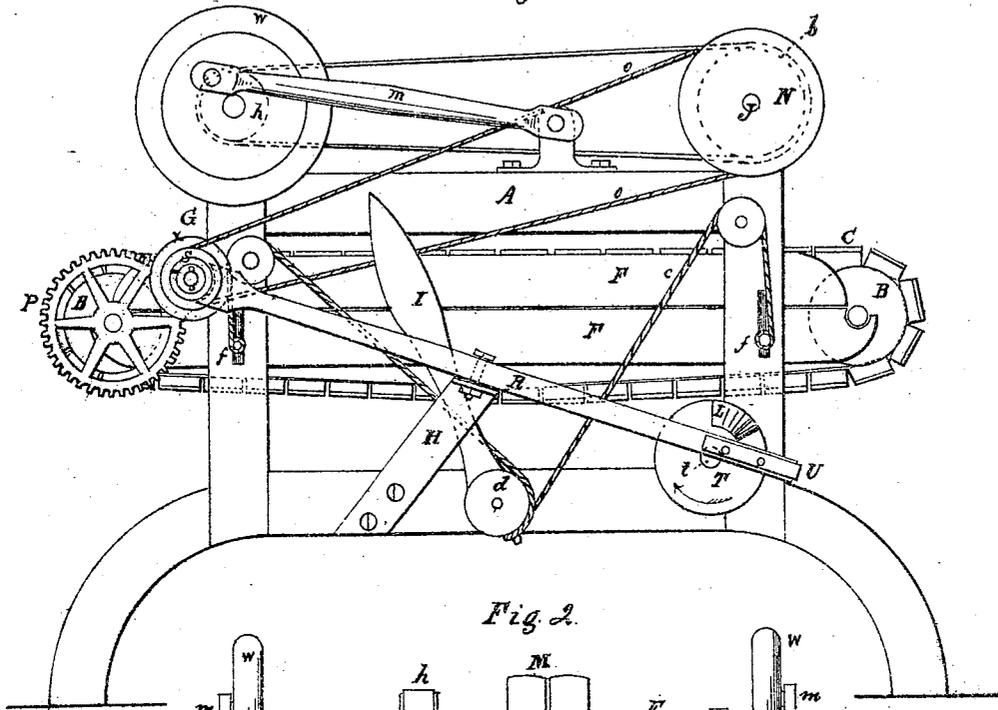
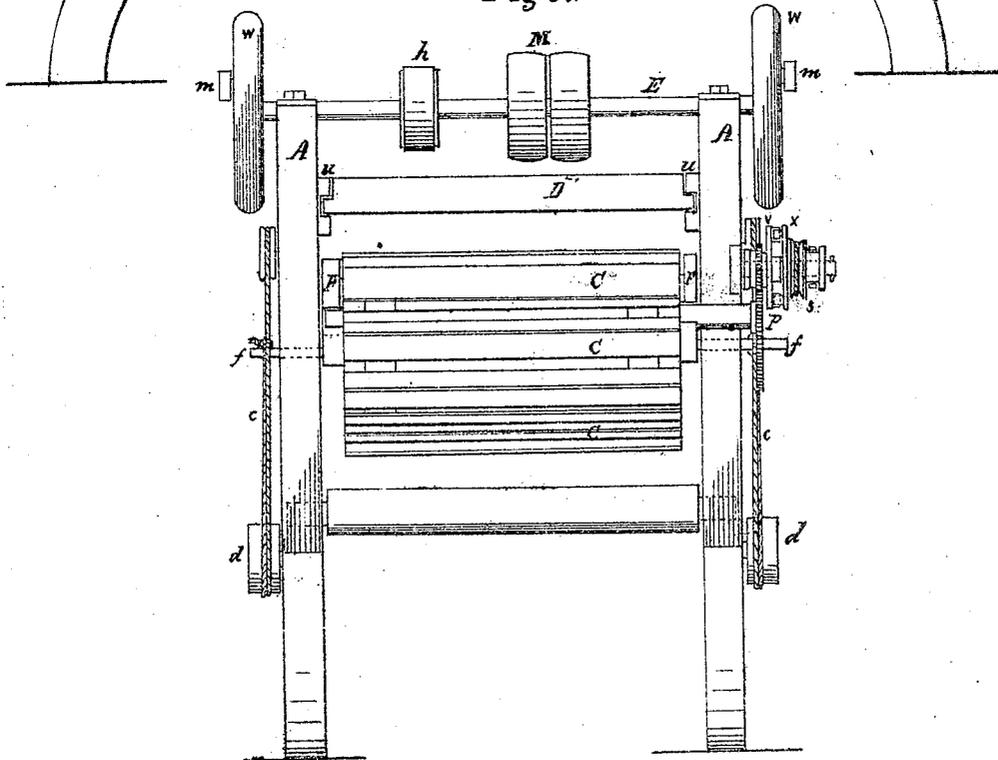


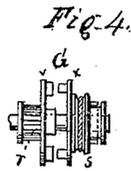
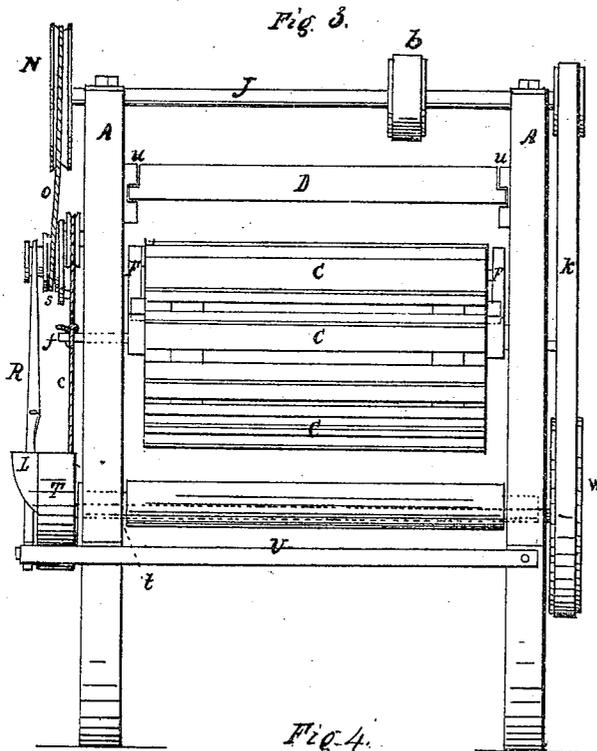
Fig. 2.



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UNITED STATES PATENT OFFICE.

JAS. B. BLAKSLEE AND E. R. BARNES, OF NEWTOWN, CONNECTICUT.

MACHINERY FOR FELTING HAT-BODIES.

Specification of Letters Patent No. 16,823, dated March 17, 1857.

To all whom it may concern:

Be it known that we, JAMES B. BLAKSLEE, of Newton, county of Fairfield, and State of Connecticut, and E. R. BARNES, of Brookfield, in the county and State aforesaid, have invented certain new and useful Improvements in Mechanism for Felting Hat-Bodies, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part of this specification.

Figure 1, represents a side elevation. Fig. 2, is an elevation of the front end showing the mechanism for giving intervals of rest to the endless rotating bed. Fig. 3, is an elevation of the rear end showing the cam by which the mechanism for stopping and starting the endless bed is actuated; also the spring for holding the lever in position against the cam. Fig. 4, is a side elevation of the clutch detached, showing said clutch in position when the endless bed is at rest.

The nature of our invention consists, in giving to the endless rotating bed of felting machines, intervals of rest while the upper deck or felting board may continue its reciprocating motion, for the purpose of giving to the material being felted a greater amount of work during its passage through the machine.

To enable others skilled to make and use our improved felting machine, we will proceed to describe the same in detail.

Like letters indicate similar parts in all the figures.

A, in the annexed drawings represents a rectangular frame constructed of any suitable material, within which frame are arranged the endless rotating bed (C) and upper deck (D), and to which frame is also secured the mechanism for actuating said bed and deck. The endless bed (C) passes over octagonal drums (B) placed at the front and rear ends of the frame (A) through which drums it receives its rotating motion.

The rotating bed (C) may be suspended and rendered adjustable by means of cords (c) secured to pulleys (d), the opposite ends of the cords (c) being fastened to cross-bars (f), which bars pass beneath an adjustable or movable frame (F) which frame supports the drums (B) over which the endless bed passes.

I represents a lever attached to the shaft

of the pulleys (d) by which these pulleys are operated to elevate and depress the endless bed (C) supported by the movable frame (F).

The upper deck (D) is sustained and reciprocates back and forth in guides or ways (u) secured to the inner side of the frame (A). Motion is given to the reciprocating deck (D) through connecting rods (m) and driving wheels (w). To the rear end of the frame (A) is placed a pulley (b) driven by belting from a corresponding pulley (h) upon the shaft (E) of the main driving wheels (M). Upon the shaft (J) of the pulley (b) is secured a belt wheel (N) from which motion through a belt (O) and wheel (S) is imparted to the mechanism for operating the endless bed. To the front end of the frame (A) is arranged an ordinary clutch (G) receiving its motion from the belt (O) and pulley (S). Upon the shaft of this clutch (G) and attached to one of its sides is placed a pinion wheel (r) which gears into a cog wheel (P) upon the shaft of one of the drums (B) over which the endless bed passes—the pinion wheel (r) being secured to one of the clutch plates (v) while the corresponding plate (x) is secured to the pulley (S) by which it receives its motion. The outer or sliding half (w) of the clutch is operated by means of a forked lever (R) pivoted near its center to a bracket (H) secured to the frame (A). The opposite end, from the fork, of the lever (R) is retained against the face of a wheel (T); upon which is secured a cam (L) operating on the inner side of said lever (R), by which means the clutch (G), by the forked end, is thrown into gear and retained until the cam (L) passes from beneath it, when the spring (U) secured to the end of the lever (R) detaches the clutch and permits the rotating bed to stop while the upper deck may continue its reciprocating motion. The wheel (T) to which the cam (L) is secured is operated through a belt (k) and wheel (w) upon the shaft (t) at the rear end of the frame (A).

The accompanying drawings represent the forked lever so arranged that at each revolution of the cam (L) the clutch (G) is thrown into gear twice, thus giving two intervals of motion and rest to the rotating bed. It is obvious that by increasing the number of cams or their equivalent, the

periods of rest given to the rotating bed may be increased at pleasure.

The accompanying drawings, represent the endless bed as traveling slower than the upper deck, but if found expedient, it may be arranged to move at the same or greater speed.

The endless rotating bed is constructed of oblong segments of wood, with their upper surfaces covered with india rubber, and are connected (in this instance) so as to form an endless belt, by narrow belts of india rubber secured to their inner surfaces, as shown in Figs. 1 and 2.

The necessity of using wood covered with india rubber for beds to felting machines, is to prevent the discoloration of the acid used in felting hat bodies which arises from oxidation when metal is used instead.

The importance of dispensing with all

metal where it must necessarily come in contact with the acid, in sizing light colored hat bodies particularly, will readily be seen, and even in black bodies, the discoloration from the metal gives them a gray, faded appearance which materially detracts from their value.

Having thus fully described our improved mechanism for felting or sizing hat bodies, what we claim therein as new and desire to secure by Letters Patent is,

Giving to the endless rotating bed of felting machines periods of rest, during the continuous motion of the upper deck, substantially as described.

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E. R. BARNES.

Witnesses:

D. H. BELDEN,
GEORGE BULKLEY.