

J.M. Pratt.
Flocking Mach.

N^o 5,757.

Patented Sept 5, 1848.

Fig. 2.

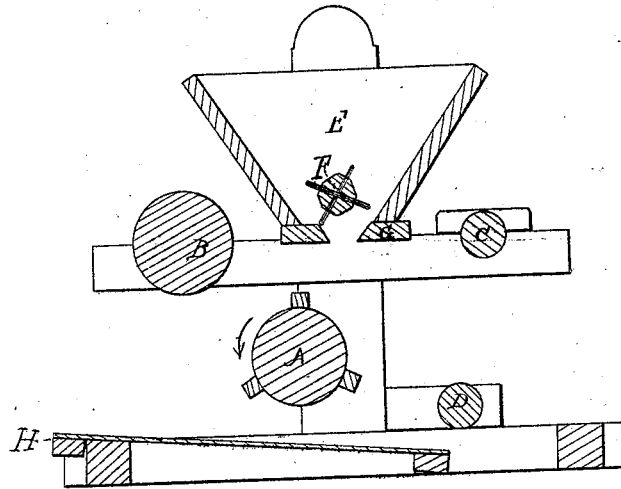
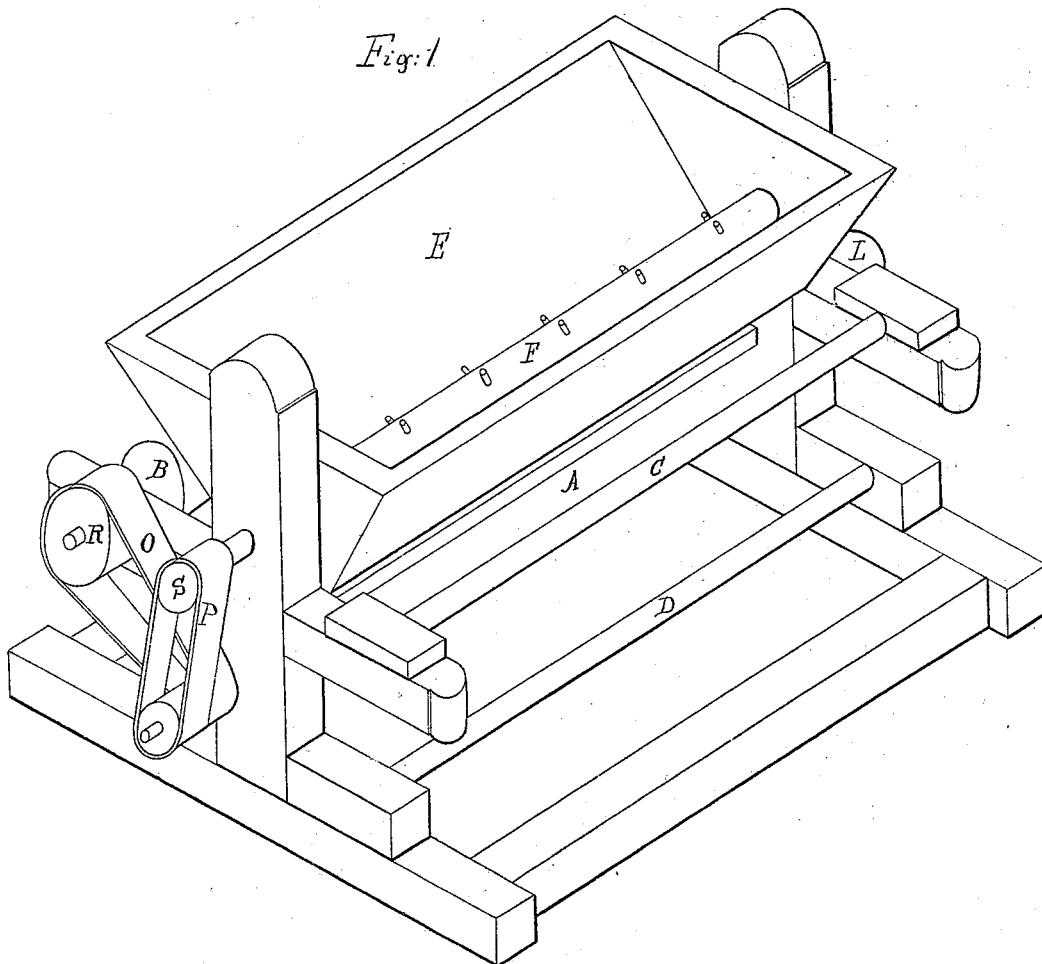


Fig. 1.



UNITED STATES PATENT OFFICE.

JOHN M. PRATT, OF DUDLEY, MASSACHUSETTS.

MODE OF INCORPORATING FLOCKS WITH FLANNEL, &c.

Specification of Letters Patent No. 5,757, dated September 5, 1848.

To all whom it may concern:

Be it known that I, JOHN MAYO PRATT, of Dudley, in the county of Worcester and State of Massachusetts, have invented a new and useful machine for putting all kinds of shearing flocks into flannels and cloths partly fulled or intended to be fulled in the most even and uniform manner; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure I is a perspective view. Fig. II is a transverse section of the machine.

The parts of this machine, and the convenient though not necessary sizes of these parts, are as follows: It consists of a frame work about 9 feet long, $3\frac{1}{2}$ feet wide, and 3 feet high, in which are placed a cylinder marked A, one friction or drawing roller marked B, two common rollers marked C and D, a hopper or flock box marked E, a hopper roller or flock picker marked F, a slide at the bottom of the hopper marked G, and an inclined platform marked H, with suitable pulleys and bands to operate the machine.

The cylinder is of wood or metal about 9 feet in length and about 10 inches in diameter, with parallel strips of wood or iron about $1\frac{1}{2}$ inches wide and 1 inch thick, put on to the outer surface of the cylinder from end to end about 6 inches apart. The shaft of the cylinder is about 19 inches distant from the bottom of the machine, and has a bearing at each end of the framework. At one end, this shaft extends beyond the framework on the outside, so far as to admit of one tight pulley 10 inches in diameter where a belt or other power is applied to operate the machine, and one loose pulley of the same diameter marked L; and at the other end the shaft extends beyond the framework and on the outside so far as to admit of two tight pulleys of 2 inches each in diameter, one for the band marked O, to connect with the friction roller, and one for the band marked P to connect with the hopper roller.

The friction roller is placed higher than the cylinder and parallel with it—being about 10 inches in diameter and 9 feet in length, and its axis is about 24 inches from the axis of the cylinder at an angle of about 45° with a horizontal plane through said cylinder axis. Its shaft has a bearing at

each end of the framework, and it extends at one end marked R on the outside of the framework, so far as to admit of a pulley about 15 inches in diameter for the band marked O, to connect the roller with the cylinder. This roller may be covered with a tight band of cloth, to assist in drawing and keeping the flannel &c. in place while being flocked.

The two common rollers are placed on the side of the cylinder opposite to the friction roller, and parallel with it, being each about 3 inches in diameter and 9 feet in length. The axis of the upper one is nearly on a horizontal plane with the axis of the friction roller and 2 feet distant from it, and is about 28 inches almost vertically above the axis of the lower common roller. These rollers, which have a bearing at each end on the framework, serve to keep the cloth in place while passing under the cylinder.

The hopper or flock box extends the whole length of the inside of the framework, and is placed almost directly above the cylinder and parallel thereto. The two sides of the hopper are formed by two boards each about 10 inches wide, placed diagonally to each other, so that the lower edges are about 3 inches apart and the upper edges about 10 inches apart. Each end is closed up by a board—the form of which is nearly that of an isosceles triangle, and the hopper is fastened to the framework.

The slide is a thin piece of board about 3 inches wide and $\frac{1}{2}$ inch thick, directly under and running the whole length of the hopper. It is attached underneath one of the side boards of the hopper by about 4 screws being fastened at equal distances in this sideboard through corresponding slits in this slide; the slits being made transversely and sufficiently long and loose to admit of the slide being moved sidewise, so as to make the aperture between the lower edges of the side boards of the flock box narrower or wider as may be necessary.

The hopper roller or flock picker is about an inch in diameter, placed inside the hopper and having its bearings at each end of the framework. Its axis, which is parallel with the axes of the other rollers, is about $1\frac{1}{2}$ inches vertically above the aperture before mentioned—measuring from this axis directly on to the upper surface of the above described slide when nearly closed. This roller, which passes through the whole

length of the hopper—has two sets of wires—each wire being about $2\frac{1}{2}$ inches long and driven at right angles to each other through the axis of the roller; by which means the wires are made to project in 4 rows along the roller. The shaft extends so far beyond the framework at one end—as to admit of a pulley marked S, about 3 inches in diameter, over which the band marked P, passes in order to connect with and receive motion from the cylinder pulley.

The inclined platform is made up of jointed boards placed underneath the other parts of the machine, in such a manner that the highest end rests on a sill about 6 inches from the floor on the same side with the friction or drawing roller, and the lowest end may rest on the floor. This platform is of sufficient length to fit the inside of the framework, and is about 4 feet wide. It serves to assist the flannel &c. in sliding back under the cylinder as it passes around for the purpose of being flocked.

To operate the machine, the piece of flannel or other goods to be prepared (or 2 or 3 pieces stitched together into one) is placed on the platform under the cylinder, and one end is passed around the two common rollers—then down under the cylinder and over the friction or drawing roller, and then stitched to the other end of the piece that lies on the platform—thus forming an endless piece to be flocked. Flocks are then put into the hopper, and the size of the aperture at the bottom of the hopper is adjusted by means of the slide—accord-

ing to the shortness of the flocks. Power is then applied to the cylinder-pulley, in the direction of the arrow as marked on the plan. This power is communicated by means of the belt marked O, to the friction or drawing roller, which moves or draws the cloth in a direction such as to rub it against the slats on the cylinder; and at the same time power is communicated by means of the belt marked P, to the hopper roller, so that the flocks are made to fall in uniform quantities upon the cylinder. The flocks are thus rubbed into the cloth while the cylinder is in rapid revolution, and this operation is to be repeated until the cloth is sufficiently flocked.

What I more particularly claim as my invention is—

The principle or mode of putting flocks into flannels and other cloths by means of rubbing them in with a cylinder and slats; and also the principle or mode of causing the flocks to fall on to the cylinder in even and uniform quantities by means of the flock-box and picker, hereinbefore described.

The machine described in the application for a caveat filed by me in the Patent Office October A. D. 1846, is the same in all essential particulars as the one herein described. The principles or modes sought to be patented are the same in each.

JOHN M. PRATT.

Attest:

WM. SUMNER BARTON,
J. A. WESTON.