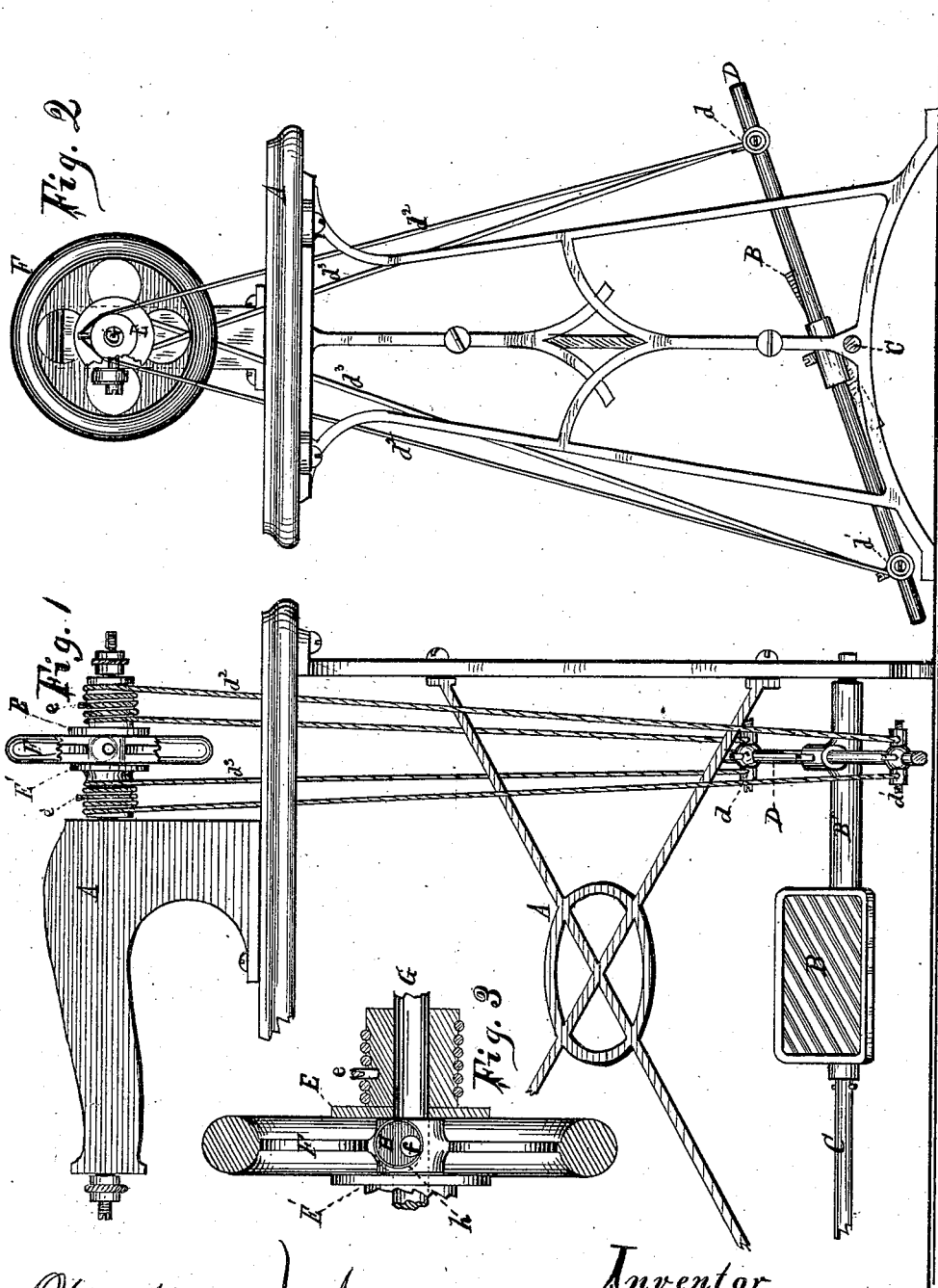


P. F. JONTE.  
Treadle Movement for Sewing-Machine.

No. 207,745.

Patented Sept. 3, 1878.



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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN TREADLE-MOVEMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **207,745**, dated September 3, 1878; application filed May 31, 1878.

*To all whom it may concern:*

Be it known that I, PIERRE F. JONTE, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Treadle-Movements for Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

In the drawing, Figure 1 is a front elevation. Fig. 2 represents a side elevation. Fig. 3 is an enlarged sectional view of the eccentric-clutch.

The nature of my invention relates to a device whereby an ordinary treadle-movement of a sewing-machine is changed into a continuous rotary motion, and being adjustable in minute degrees to increase or decrease in its speed with a given speed of the treadle. An important feature is that the sewing-machine cannot be run backward, and hence the operator, on moving the treadle in either direction, will at once move the machine in the forward course. This saves the operator much mental labor, as in the ordinary treadle using the band-wheel, crank, and pitman, or their equivalents, the mind is under constant strain to prevent the machine starting backward and disarranging the work.

In construction my invention is as follows: A A is a portion of an ordinary sewing-machine, but having no band-wheel with its crank and connecting pitman. The usual form of a treadle is seen at B, having permanent sleeve B' attached, through which a fixed rod or bar, C, passes, on which the treadle oscillates freely. A lever, D, is held to sleeve B' by means of a set-screw, and two double clamps,  $d$   $d'$ , are held to lever D, also by means of set-screws, and are adjustable on said lever to and from the center of motion. A cord,  $d^2$ , is held to clamp  $d$  by a screw or other suitable means, and winds one or more rounds about the loose pulley E, following the spiral thread cut thereon to guide the winding of said cord. The other end is then attached to clamp  $d'$ . A second cord,  $d^3$ , also starts from clamp  $d$ , is wound one or more rounds about

the loose pulley E', but is wound reversed from that of cord  $d^2$ , and has the other end also attached to clamp  $d'$ . Small studs  $e$   $e'$  are embedded in the threads of pulleys E E', which studs, being notched, as shown, retain the cords passing in said notches, preventing them from slipping. The fly-wheel F is permanently attached to shaft G, which gives motion to the various working parts of the machine. In the center of wheel F is seen a small stud,  $f$ , rising from the hub of the wheel, on which is placed the pivoted eccentric-clutch H, being lined or covered with rubber, leather, or other like material, at  $h$ . The size of the clutch H and its covering  $h$  is made to be slightly less than the distance between the inside faces of the two loose pulleys, as may be observed by reference to Fig. 3.

In operation my invention is as follows: On depressing the toe end of the treadle clamp  $d$  is also depressed. This draws down cord  $d^2$ , and gives a rotary motion to loose pulley E. As soon as it starts forward it draws the eccentric-clutch H against itself, tightening the gripe as the force is increased, and thus rotating the fly-wheel a distance equal to the movement of the pulley itself. At the same time that pulley E makes this forward movement pulley E' makes a corresponding reverse movement, caused by cord  $d^3$  rotating it, as indicated in the drawing, the clutch H not touching it. As the motion of the treadle is reversed clamp  $d'$  now descends, and by means of cord  $d^3$  engages the clutch with pulley E' as soon as it has started forward, and continues in engagement as long as force is applied in that direction by the treadle. As soon as pulley E' releases clutch H pulley E takes it, and thus the alternate backward and forward movement of the pulleys moves the wheel F forward continuously and in a uniform speed.

Should it be desirable to gain greater power over the machine by the application of the same force, then clamps  $d$  and  $d'$  are placed nearer the sleeve B', when it is obvious the cords have a less amount of travel, and hence give the loose pulleys E and E' less motion to a given stroke of the treadle. Should greater speed be required, the clamps are adjusted in reverse position.

This construction therefore gives these desirable points: first, a change of speed or power adjustable in minute degrees; second, running the machine at all times in one direction and never backward; third, no dead-center of a crank, which requires the operator to use the hand to start the machine; fourth, greater simplicity and fewer wearing parts, giving machine always a quiet and direct motion.

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

1. The combination, with the shaft G, of the fly-wheel F, keyed thereon, the single eccen-

tric-clutch H, mounted on a stud, *f*, projecting from the hub of the said fly-wheel, and the loose pulleys E E', mounted on the shaft on each side of the fly-wheel and engaging alternately with opposite sides of the single eccentric-clutch, substantially as described and shown.

2. The adjustable clamps *d d'*, to vary the speed or power of said device, as herein specified.

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