

G. W. MANSON.
Sewing-Machine Motors.

No. 148,225.

Patented March 3, 1874.

fig. 1.

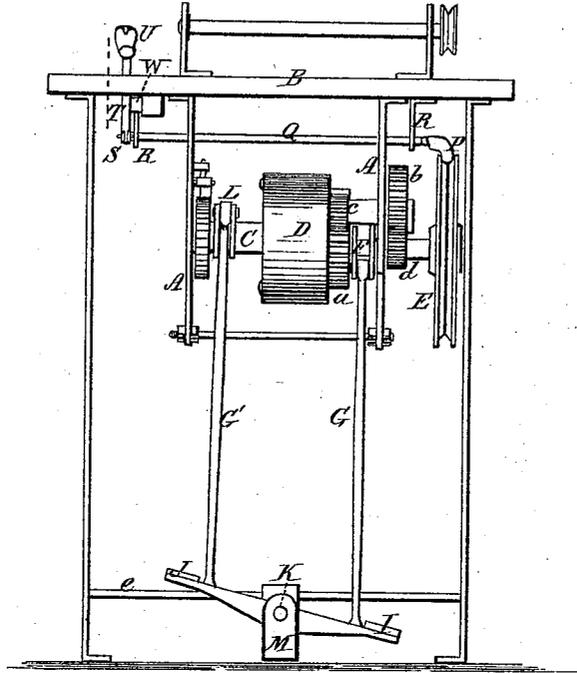


fig. 2.

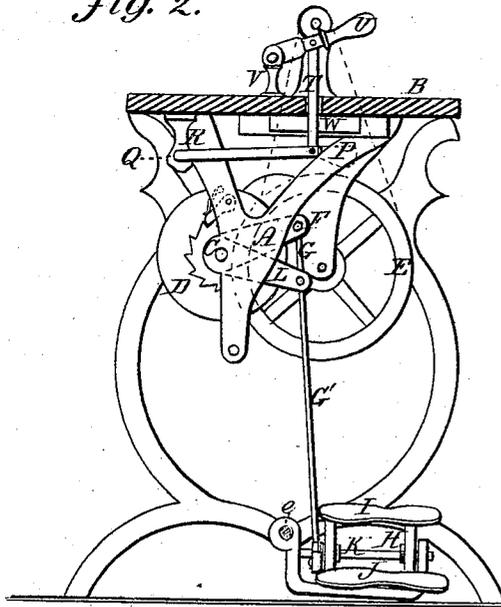
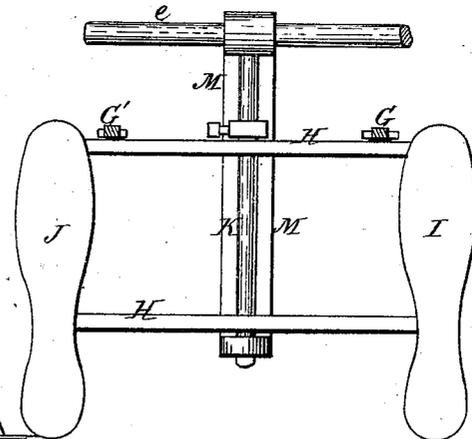


fig. 3.



Witnesses:

J. West Wagner,
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Inventor:

George W. Manson
By Johnson and Johnson
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UNITED STATES PATENT OFFICE.

GEORGE W. MANSON, OF AUBURN, MAINE.

IMPROVEMENT IN SEWING-MACHINE MOTORS.

Specification forming part of Letters Patent No. 148,225, dated March 3, 1874; application filed January 6, 1874.

To all whom it may concern:

Be it known that I, GEORGE W. MANSON, of Auburn, in the county of Androscoggin and State of Maine, have invented certain new and useful Improvements in Sewing-Machine Motors, of which the following is a specification:

The invention claimed under this patent is an improvement upon a patent granted to me January 20, 1873, for an improvement in sewing-machine motors. The particular features of my present invention relate to the treadle for keeping the driving-power wound up, and arranged to operate in connection with winding devices; and my improvement consists in combining with duplex swinging or oscillating pawl-frames of the winding-shaft, the duplex treadle-frame, and the alternately-acting connecting-rods, for joint action in winding up the sewing-machine motor, and to maintain the spring at its maximum power by the continuous winding action of both feet upon the swinging winding pawl-frames, as hereinafter described.

In the accompanying drawings, Figure 1 represents a front elevation of a machine embracing my improvements. Fig. 2 represents a side elevation with the end frame removed, and Fig. 3 a top view of the duplex treadle.

The driving mechanism is mounted in a supplemental frame, A, suspended from the under side of the table B, and is, in all respects, the same as described and shown in my before-mentioned patent, being mounted upon a winding-shaft, C, which carries the spring driving-drum D, the motion whereof being communicated to the driving-pulley E through cog-wheels *a b* and pinions *c d* mounted in the supplemental frame.

In my patent aforesaid, the operating-treadle is mounted directly upon the base cross-rod of the main frame, and its connecting-rod is attached to the free end of a pawl-frame, swinging or oscillating freely upon the winding-shaft, so as to engage with a ratchet thereon to wind up the motor by the heel and toe pressure action of the foot with an intermittent motion.

In my present invention, the connecting-rod G unites the swinging or oscillating pawl-frame F to an independent oscillating frame, H, carrying a right and left treadle, I J, equally dis-

posed between a pivot-support, K, for said frame, another treadle-rod, G', connecting the left side of the treadle-frame H with a pawl-frame, L, oscillating or swinging freely upon the winding-shaft and performing a winding function like the pawl-frame F, first described, the two, jointly, effecting the winding operation. The treadle-rods G G', for this purpose, are arranged parallel to each other, and the pivot-support K of the treadle-frame H has its bearing in a hanging bracket, M, secured to the cross-rod *e* of the main frame, and resting firmly on the floor, so that the feet of the operative press the foot-rests I J upon each side of the center pivot-support. By this means the uncomfortable heel and toe pressure movement, requiring the exercise of all the muscles of the back, is avoided, and a pleasant alternate rocking movement of each limb, which ends with the hip-joints, substituted. In this way a double winding action is obtained, and the spring thereby constantly maintained at its maximum power by a continuous winding action of both feet. The force of the spring being thus maintained, a friction-brake is applied for action upon the grooved belt-wheel E, the bearing-point P of which brake is carried upon the end of a branched rod, Q, mounted in hangers R beneath the table, and connected, through its left branch S, by a vertical link, T, with a hand-lever, U, pivoted in a short post, V, upon the top of the table, the depression or elevation of this lever U by the left hand putting on or releasing the brake, and thereby controlling the motion of the machine.

To stop the motion, the left hand need only bear gently upon the lever, and upon relieving the pressure of the hand and raising the lever the machine will be free to run.

The brake P is held in and out of action by a spring, W, secured to the under side of the table, so as to bear laterally upon the link T, and hold it in its elevated or depressed position.

I am aware that double treadle movements are not new; and the pivoted foot-treadles have been used with a rocking lever to obtain an equal leverage to each treadle to operate the pitman and balance-wheel of sewing-machines, and I make no claim to a double treadle-frame,

as such, but only in connection with the winding devices combined and arranged to operate as described.

I claim—

The combination of the duplex treadle-frame H I J with its pivot-rest K, the connecting-rods G G', and the swinging or oscillating

pawl-frames F L of the winding-shaft for joint action in winding up a sewing-machine motor, substantially as described.

GEORGE W. MANSON.

Witnesses:

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THOMAS LITTLEFIELD.