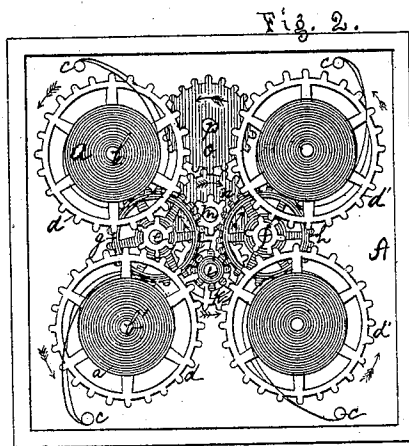
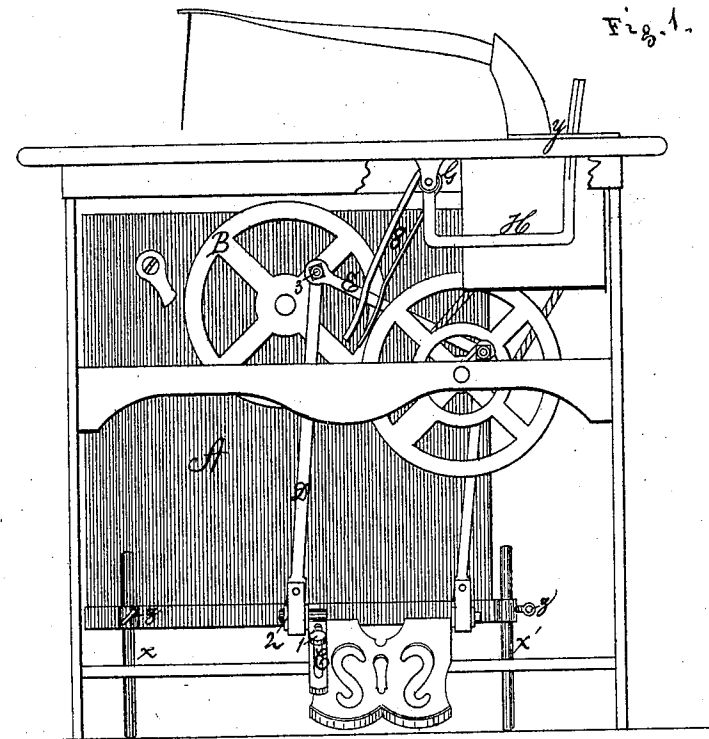


W. FAY.
Motors for Sewing-Machines.

No. 150,141.

Patented April 28, 1874.



WITNESSES.

Hugh Purson
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WILLIAM FAY, OF NEW ORLEANS, LOUISIANA, ASSIGNOR OF ONE-HALF
HIS RIGHT TO PHILIPP GANTERT, OF SAME PLACE.

IMPROVEMENT IN MOTORS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **150,141**, dated April 23, 1874; application filed
July 21, 1873.

To all whom it may concern:

Be it known that I, WILLIAM FAY, of the city of New Orleans, parish of Orleans and State of Louisiana, have invented a new, useful, and Improved Mechanical Arrangement, whereby a sewing-machine may be operated by spring-power, the said spring-power differing from that applied to my improvement in automatic fan, filed July 21, 1873, only in the number of springs used in the construction of the same.

The motive-power is incased in a neat box, which is provided with legs, upon which it can be raised or lowered at will, and held in any position by means of set-screws, thus enabling it to be readily adjusted to sewing-machines of different heights.

The speed of the machine is easily controlled or regulated by means of a friction-brake of peculiar construction, and which, being attached to the sewing-machine, places the whole apparatus under complete control of the party attending the same; but my invention will be better understood by referring to the drawing, whereon, at—

Figure 1, is plainly shown a sewing-machine in connection with my improved spring-power, and also the brake for regulating the speed of the same. Fig. 2 shows the arrangement of the springs, toothed wheels, &c., which constitute the spring-power above referred to, the front of the case containing the said power being removed in order the better to exhibit the same.

A is the case made to contain the spring-power, and $x\ x'$ the legs, upon which it can be raised or lowered, and held at any height by means of the set-screws z . My spring or motive power itself consists of eight volute springs, $a\ a'$, &c., which are placed in pairs on the shafts $b\ b'$, &c., and to which their inner ends are secured, while their outer extremities are fastened to the connecting-bars c of the case A. Upon the shafts $b\ b'$, &c., and between each pair of springs, are rigidly secured ratchet-wheels, (not shown on the drawing,) and which, when the springs are wound up, engage their respective spur-

wheels, $d\ d'$, &c., by means of pawls operated by springs in the ordinary manner. The rear ends of shafts $b\ b'$, &c., project beyond the casing, and are fitted with keys for the purpose of winding up the springs.

When in motion the spur-wheels $d\ d'$, &c., engage the respective pinions e and f , which are keyed upon shafts, to which are also keyed the cog-wheels $g\ h$, both of which gear into the pinion i . Upon the same shaft with the said pinion i is also fitted the toothed wheel k , which, in turn, engages the pinion m . To the same shaft upon which the pinion m is secured is also fitted the wheel n , which, in turn, gives motion to the wheel o , and consequently the shaft p , one end of which projects outside the front of the casing A, and to this end is secured the wheel B, from which motion is transmitted to the treadle of the sewing-machine.

It being impossible to place the motive-power so that the wheel B of the same should be directly over the treadle, owing to the central brace used in the construction of sewing-machines, I attach to the said treadle an extension, as is plainly shown at C, and which is made adjustable by means of the set-screws $1\ 1'$. At the outer end of this extension is a wrist, 2, to which one end of the connecting-rod D is attached, the opposite end being connected with the adjustable pin 3 of the wheel B.

A second rod, E, connecting at one end with the fly-wheel of the sewing-machine and at the other end with the wrist 3, is provided, in order to obtain a steady rotary motion for the fly-wheel of the sewing-machine—an object not accomplished with a single connecting-rod.

The double friction-brake δ is suspended beneath the table of the sewing-machine, as shown at G, and is operated by means of the lever H, which has one of its ends secured to the said brake at G, while the opposite end passes up through a slotted plate, y , fastened to the top of the table.

The operation of the brake is as follows: Should it be desired to slacken the speed of

the machine, the attendant moves the lever to the left, which causes the lighter brake to impinge upon the face of the fly-wheel of the sewing-machine. To stop the machine the lever is moved still farther to the left, which brings the stiffer brake to bear upon the lighter one, stopping the machine easily and quickly.

What I claim as new, and desire to secure by Letters Patent, is—

An adjustable sewing-machine motor, composed of the spring-power herein described, and provided with an extension-treadle, C, and connecting-rods D E, in combination with the double friction-brake S and lever H, substantially as described.

WILLIAM FAY.

Witnesses:

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