

Chapman, Goodspeed & Reed.

Sewing Machine Motor.

Patented Nov. 12. 1867.

N^o 70,803.

Fig. 1.

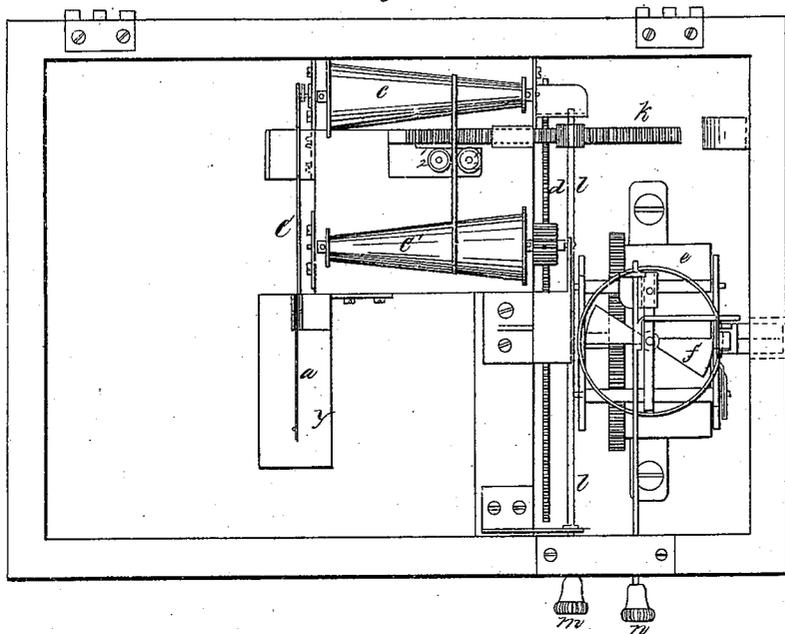
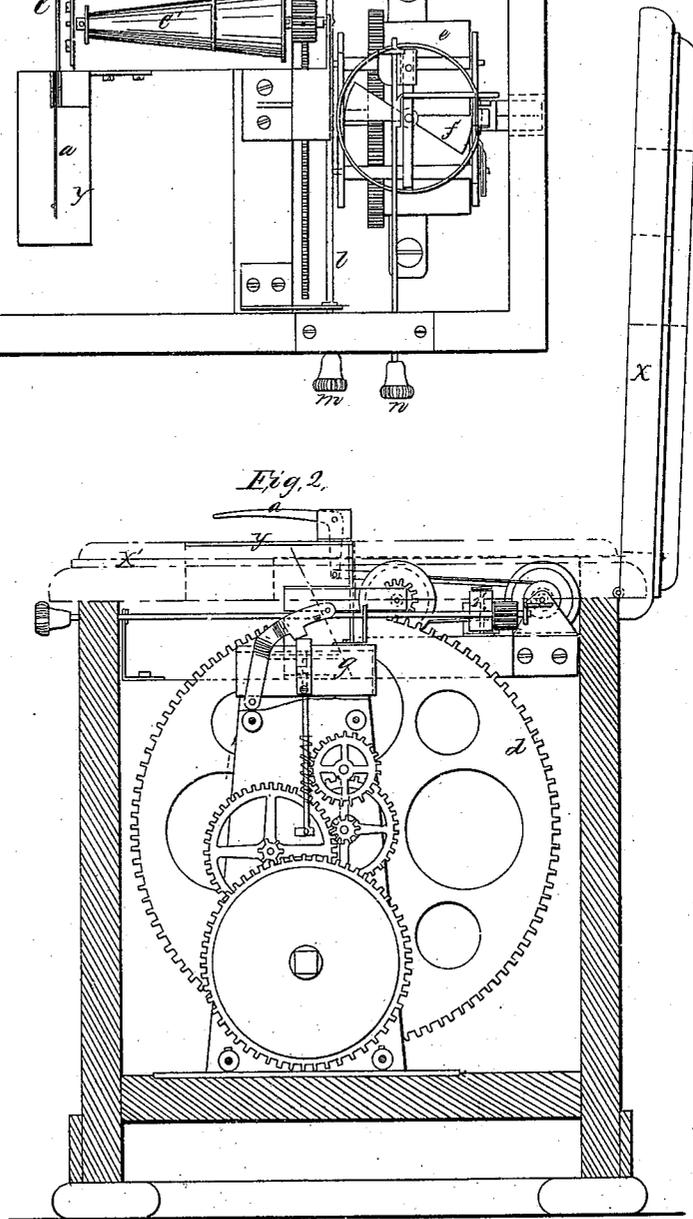
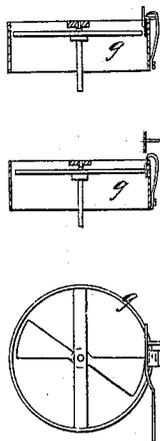


Fig. 2.



Witnesses.

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WILLIAM Z. W. CHAPMAN, OF NEW YORK, N. Y., H. C. GOODSPEED, OF PLAINFIELD, NEW JERSEY, AND EDWIN REED, OF BATH, MAINE.

IMPROVEMENT IN MOTOR FOR OPERATING SEWING-MACHINES.

Specification forming part of Letters Patent No. 70,803, dated November 12, 1867.

Be it known that we, WILLIAM Z. W. CHAPMAN, of the city, county, and State of New York, H. C. GOODSPEED, of Plainfield, New Jersey, and EDWIN REED, of Bath, Maine, have invented certain new and useful Improvements in Operating Sewing-Machines, and in the construction thereof; and we do hereby declare and ascertain our said improvements, referring to the accompanying drawing illustrating the same, in which—

Figure 1 is a plan of the machinery. Fig. 2 is an elevation.

It is a well-known fact that the working of sewing-machines by the feet of the operator is very injurious to health, and that it especially tends to produce and develop disease in females, so that the use of such machines is often abandoned by advice of the physician. It is equally obvious that said machines cannot be worked by steam, except in factories, while the most important and useful purpose of a sewing-machine is for domestic uses in the family.

Our invention is intended to supply, in a cheap, convenient, and efficient manner, a propelling power easily put in operation, and applicable in all situations to work said sewing-machines of any construction applicable to domestic purposes.

In the drawing, which illustrates our invention, we represent an apparatus driven by a spring of helical form, and the competent mechanic will need nothing more to enable him to construct the device with other formed springs or weights.

To the needle-arm *a*, or other convenient moving part of a sewing-machine, we connect, by a crank and pitman, *b*, a cone-pulley, *c*, parallel with which we place another cone-pulley, *c'*, and unite the two with a band. The cone-pulley *c'* has a pinion on its axis, that gears into a spur-wheel, *d*, connected by a proper train of gears with the barrel *e*, containing the spring-motor.

To regulate the velocity and equalize the motion of the gear, a fan or wing wheel, *f*, is represented at *g*. Any other method of effecting the same object which may be found efficient may be substituted.

To wind up the motor, a key or crank may be applied to the axis of the barrel *e*, and if the power required to wind up is too great for the ordinary operator, a gear may be added

to increase the leverage. These things, being so well known to mechanics, need no specific description.

The mechanism may all be inclosed in a cabinet, and the cover thereof, or the top of the table flush with the sewing-plate, is hinged so as to raise up and uncover the working parts below, as seen in Fig. 2, *x*. When in place it forms, with the sewing-plate *y*, the table on which the work to be sewed rests. This is represented by the red lines *x'*.

To regulate the velocity of the needle, or the number of stitches taken in a given time, we connect a shifting apparatus to the band running on the cone-pulleys *c c'*, which consists of pulleys *i i*, embracing the band, and affixed to a sliding rack, *k*, into which a pinion works on a shaft, *l*, with a thumb-piece on its outer end, *m*, that projects beyond the case in front, convenient to be turned by the hand of the operator, to regulate the velocity of the machine.

n is a stop-slide, to stop the machine or put it in motion, at the will of the operator.

It will be noticed that in using this machine it always drives the sewing-machine in one direction, and cannot be reversed.

Having thus fully described our improvement, what we claim, and desire to secure by Letters Patent, is—

1. A sewing-machine motor in which is a barrel inclosing the coiled spring, the equalizing fly-wheel, the train of gears, regulating cone-pulleys *c c'*, connected by a band which is operated by a sliding rack and pinion, all constructed and combined as described, and for the purposes set forth.

2. In combination with the above, we claim the brake apparatus, constructed as described, and for the purposes set forth.

3. In like combination, we claim the arrangement of the cover of the table, provided with an aperture, which, while shut, will expose the arm and plate, and when open will neither disturb the machine nor carry any part thereof with it.

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Witnesses:

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