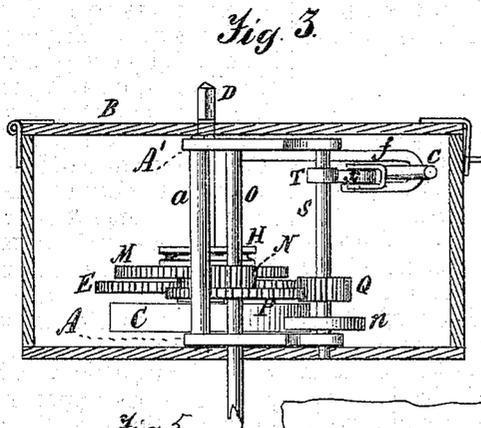
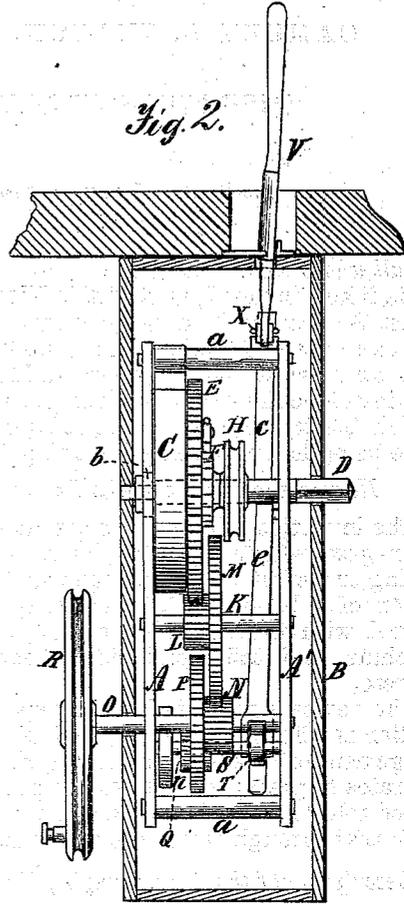
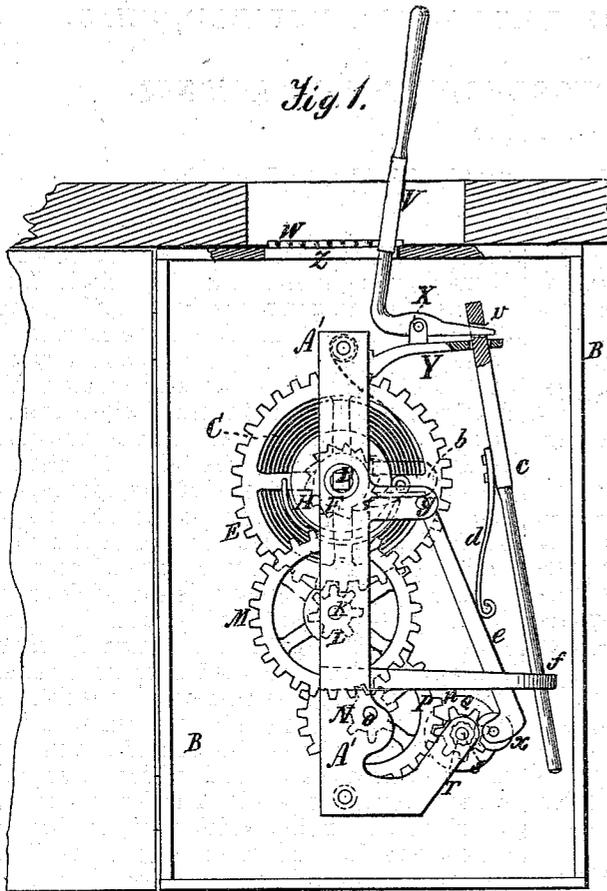


C. L. WILCOX.

Improvement in Motors for Sewing-Machines.

No. 127,129.

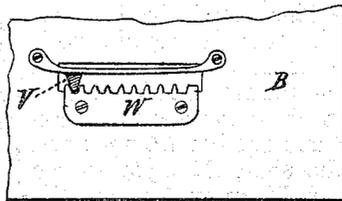
Patented May 21, 1872.



Inventor:
 Camden L. Wilcox
 by his attys
 Cox and Lot

Fig 4

Witnesses:
 A. Ruppert
 J. L. Lumbard



UNITED STATES PATENT OFFICE.

CAMDEN L. WILCOX, OF WEST WILLIAMSFIELD, OHIO.

IMPROVEMENT IN MOTORS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 127,129, dated May 21, 1872.

To all whom it may concern:

Be it known that I, CAMDEN L. WILCOX, of West Williamsfield, in the county of Ashtabula and State of Ohio, have invented certain new and useful Improvements in Motors for Sewing-Machines and similar purposes, of which the following is a specification, reference being had to the accompanying drawing.

Nature and Objects of the Invention.

The invention relates to an arrangement of spur-gear wheels operated by an elliptical spring or weight and cord, causing the revolution of a band-wheel, which may be connected with the driving-wheel of a sewing-machine, and thus communicate movement thereto.

The device is regulated as to its speed, or its motion is wholly checked, by means of an arrangement of levers operating a spring which operates to press a friction-wheel upon a corrugated roller or wheel upon a shaft connected with that through which the motor acts.

Description of the Accompanying Drawing.

Figure 1 is a side view of the mechanism. Fig. 2 is an end view of the same, and Fig. 3 is a plan view of the same. Fig. 4 is a plan of the ratchet W. Fig. 5 is a side view of the wheel T on the shaft S.

General Description.

A A' in the accompanying drawing are bars, connected by the standards *a*, these parts forming a frame of the device inclosed in the case B, which is attached in a proper manner to the side of a sewing-machine. C is an elliptical or coil-spring, secured to and coiled about the lower part of the shaft D, and has a bearing against the block or plate, *b*. The shaft D revolves in bearings in the upper and lower bars of the frame. Immediately above the spring C and rigidly secured at its center to the shaft D is the spur-gear wheel E, which is provided with a spring-pawl having an inward pressure and engaging the teeth of the ratchet F, which is also fixed at its center to the shaft D. Between the ratchet F and the bar A', upon and rigidly secured to the shaft D, is placed the spool or pulley-wheel H, around which the cord is wound in case the device is to be operated by a weight and cord. If, however,

the spring C is the actuating power, the wheel H may be dispensed with. The shaft K revolves in bearings in the bars A A', at such distance from the shaft D that the teeth of the wheel E engage the pinion L, above which and firmly secured to the same shaft is the spur-gear wheel M, the teeth of which engage the pinion N, below which and on the same shaft O is secured the wheel P. The shaft O projects through the side of the case B, and should be so placed that the wheel M and pinion N may engage and the end of the shaft project through the case B in the line of its longitudinal center. To this end of the shaft O the band-wheel R is firmly fixed. The spur-gear wheel P engages the pinion Q on the shaft S, which is provided near its lower extremity with the fly-wheel *n*, and revolves on bearings in the bars A A' of the frame. Above the pinion Q and near the end of the shaft is firmly secured the wheel T, which is slightly indented or corrugated. The lever V is provided with a handle, which projects through a slot, *z*, in the side or top of the case B, so as to be in convenient position to the operator of the sewing-machine. A notched plate, W, is provided on the under side of said slot, which serves to hold the lever V in any desired position. The opposite part of the lever is bent and at a proper point pivoted to an ear, X, on the bar Y, secured to the plate A'. The extremity of this part of the lever enters a slot, *v*, in the end of the sliding bar *c*, which is supported at one end in a slot in the bar Y, and at the other by the open or hooked bar *f* in such manner that it can move vertically and its lower end laterally. The bar-spring *d* is secured at one end at a proper point to the bar *c*. The other end of this spring is rolled and comes in contact with the swinging arm *e*, upon which it has a lateral pressure and a vertical movement. The swinging arm *e* is pivoted at its upper end to the extremity of the projection *g* of the bar A', and is of such length that the friction-wheel *x* at its other end comes in contact with the wheel T on the shaft S.

Operation.

The device is inclosed in the case B, is firmly secured to or immediately below the table of a sewing-machine, so that the handle of the

lever V projects above the surface of the table in such position as to be within convenient reach of the operator of the sewing-machine. In the event of a cord and weight being used instead of the spring an aperture is made in the bottom of the case, through which the cord passes, having a weight of proper gravity secured to its end. The lever V is drawn toward the operator to the end of the slot *z*, its edge passing into and being held in this position by the notched plate W, thus locking or clamping the device, which is then put in operative order by turning the shaft D, so as to contract the spring C or coil the cord upon the pulley-wheel H. When it is desired to communicate motion to the sewing-machine the lever V is moved from the operator. This elevates the sliding bar *c*, thus reducing the pressure of the spring *d* upon the arm *e*. In this manner the bearing of the friction-wheel *x* upon the wheel T is so lessened that it can revolve. As the bearing of the friction-wheel *x* alone prevents the movement of the device, when that is properly diminished the motion is at once begun. The rapidity of the movement is governed by the position of the lever V. Thus, in proportion as it is moved from the operator the rapidity of the movement is increased, and, as it is drawn toward the operator, it is reduced, for thus the bearing of the friction-wheel *x* is respectively diminished or increased.

It is obvious that the device as a motor can be applied in any ordinary manner. Thus the extremity of the shaft O may be provided with

a band-wheel, R, over which the belt which passes over the belt-wheel of the sewing-machine may be placed, or the attachment may be direct with the driving-shaft of the sewing-machine. These connections are merely suggested as simple and convenient.

Claims.

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

1. The swinging arm *e* provided with the friction-wheel *x*, in combination with the corrugated wheel T, substantially as shown and described.

2. The combination of the sliding bar *c* provided with the spring *d*, the swinging arm *e*, the friction-wheel *x*, and corrugated wheel T, substantially as shown and described.

3. The combination of the lever V, notched plate W, sliding bar *c*, spring *d*, swinging arm *e*, friction-wheel *x*, and wheel T, substantially as shown and described.

4. The swinging arm *e*, provided with the friction-wheel *x*, substantially as shown and described.

In testimony that I claim the foregoing invention of improvements in motors for sewing-machines, &c., as above described, I have hereunto set my hand and seal this 23d day of March, 1872.

CAMDEN L. WILCOX. [L. S.]

Witnesses:

J. R. LOOMIS,
N. R. LOOMIS.