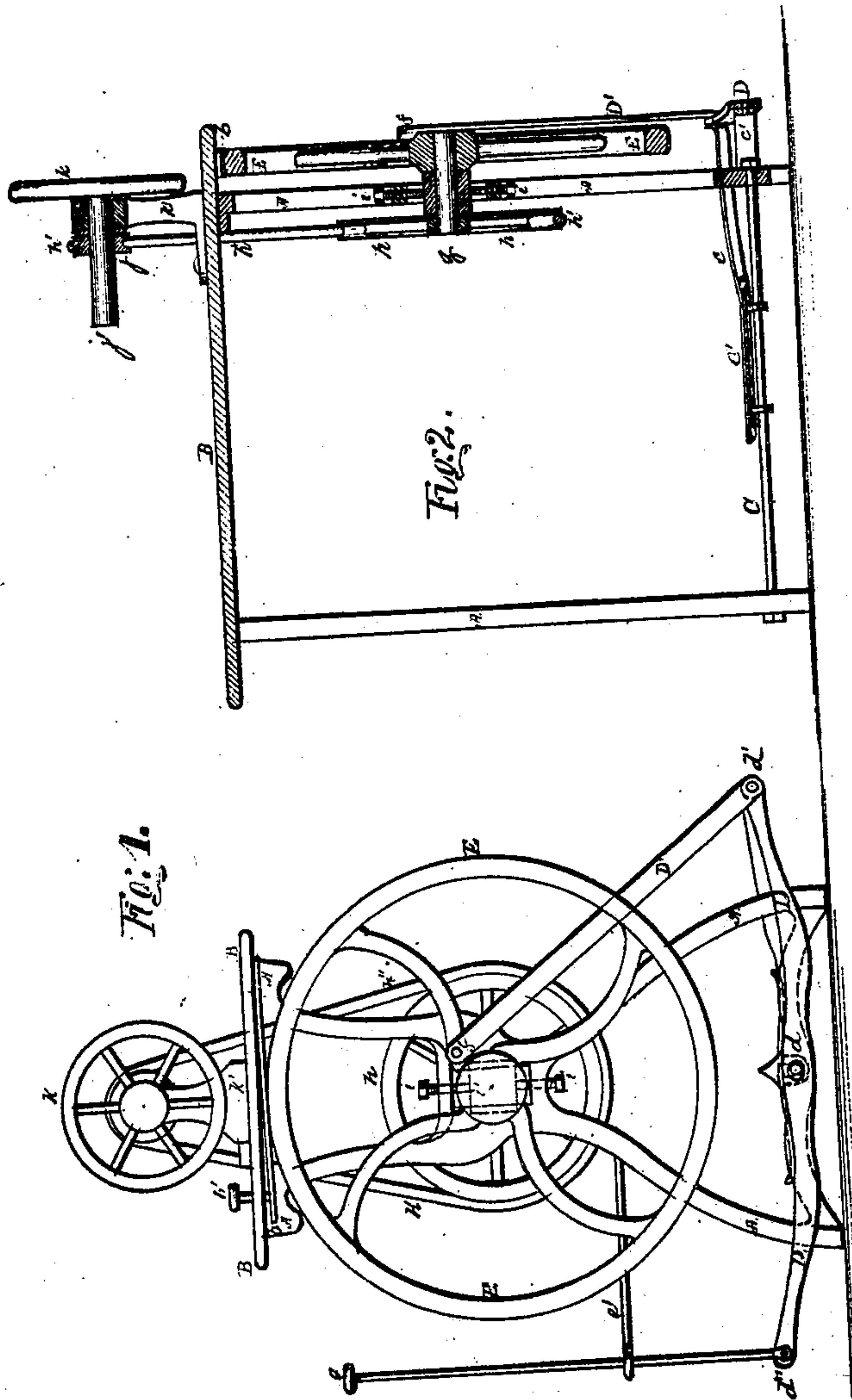


W. Wellington,

Motor.

No. 100,346.

Patented Mar. 1. 1870.



Witnesses:
J. H. Sutherland
S. M. Paul

Inventor:
William Wellington
By A. Crawford, his attorney

United States Patent Office.

WILLIAM WELLINGTON, OF ROCKFORD, ILLINOIS.

Letters Patent No. 100,346, dated March 1, 1870.

IMPROVEMENT IN APPARATUS FOR TRANSMITTING MOTION TO SEWING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern :

Be it known that I, WILLIAM WELLINGTON, of Rockford, in the county of Winnebago, in the State of Illinois, have invented certain Improvements in the Mode of Transmitting Motion to Sewing-Machines, of which the following is a specification.

It is a well-known fact that it is a difficult matter to start and keep in motion with the foot alone a sewing-machine, and this especially applies to new beginners in operating sewing-machines. It is also a well-known fact that it is injurious to many of the sewing-machine operators to give motion for a long time to such machines by means of a treadle operated by the foot, and the object of this invention is to avoid in whole or part these difficulties; and

It consists in the special construction, arrangement, and combination of the operating devices that will accomplish the object; and

It also consists in a ready and easy means of checking the motion at the will of the operator.

In the drawings—

Figure 1 represents an upright transverse view, and

Figure 2 is an upright longitudinal view in section.

A represents the legs of the machine.

B, the top or table.

C is a rock-shaft going longitudinally across the machine, and is journaled at each end into the cross-pieces between the legs near their lower ends, and has treadle C' firmly attached thereto, and at the back end of treadle C' is an elongated arm, *c*, that extends around back of the leg to an oscillating bar D, which is pivoted at *d* at or near to its center to a projecting stud, *c'*, that is fastened to the cross-piece between the legs A.

The extended arm *c* of the treadle is also pivoted at its extreme end at *d* to the back end of the bar D, and to the connecting-rod or pitman D' in such manner as that the arm *c*, bar D, and pitman D' may all be free to work in operating the machine.

The forward or front end of bar D is pivoted at *d''* to an upright hand-rod, *e*, which passes through a horizontally-projecting guide, *e'*.

This guide *e'* tends to keep the hand-rod *e* in its upright or nearly upright position whenever it is reciprocated to give motion to the machine.

The upper end of the connecting-rod or pitman D' is pivoted at *f* to the main driving-wheel E at the proper distance from its axis to give a revolving motion to said wheel E, which is secured on a horizontal shaft *g*, and outside of the legs of the machine.

The horizontal shaft *g* is held in its place by an adjustable box, *h*, and is adjusted by temper-screws *i*.

On the inner end of horizontal shaft *g* is placed band-wheel *h*, which is grooved on its periphery to receive band *h'*.

The band *h'* goes from pulley *h* to and around pulley *j*, which is fixed securely upon horizontal shafts *j'*, and is journaled in a box on upright standards *k* on the top of the machine, and from shaft *j* is communicated the necessary motion to the needle in any suitable manner.

Upon the outer end of shaft *j'* is a hand-wheel *k*, which may be used by the operator to start the machine into motion, and when in motion serves as a balance-wheel to a certain extent.

Underneath the table and over the driving-wheel E is a spring-plate brake, *b*, securely attached to the under side of the table at its back end, leaving its front end free to be forced down upon the wheel E by means of the knob *b'* which is attached to the spring-brake by a stud that extends from the brake up through and above the top of the table to knob *b'*.

Whenever, for any cause, it is necessary to check or stop the motion of the machine, the operator will place a finger upon knob *b'*, and by gently pressing the spring-plate brake down upon wheel E the motion is retarded or entirely stopped, or graduated to any desired degree necessary in the performance of the work on the machine.

This brake is located so that it is convenient to the operator; is simple and effective in its results, not liable to get out of repair, or when out of order is easily put in working condition again.

In starting the machine, the operator will, as usual in treadle-working machines, place the foot or feet upon the treadle, and one hand upon the hand-rod *e*, and by an effort of rocking the feet with the treadle, and at the same time reciprocate the hand-rod with the hand, the machine is quickly put in regular motion, avoiding the balks usually attending the efforts of new beginners in starting and keeping in motion the machine by reason of not applying the weight of the foot to the treadle before the pitman-pin has passed what is termed the dead-center line, and thus stopping the machine, or reversing its motion, but by using the hand-lever in connection with the treadle the operator soon learns to start and keep the machine in steady motion without danger of reversing the motion of the machine.

Another great advantage resulting from my improvement is the ready means that the operator has at will to run the machine by either the treadle and foot, by the hand-rod and hand, or by both combined, as may best suit the feelings of the operator, always giving a chance of rest either to the foot or hand by the ready means of a substantial change in the mode of operating, and thus enabling the machine to be operated by the same operator a longer time than could be done by either mode alone, and at the same time enable the operator to avoid the danger of injury that

often results from the driving the machine by the foot and treadle without a chance of change, or operating the machine by other means.

The band from wheel *h* to wheel *j* is kept in the proper strain by means of the temper-screws *i i* operating to raise or depress shafts *g* at pleasure, and thereby tighten or loosen the band *h'*.

Having thus fully described my invention,

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

1. The combination of the hand-rod *e*, guide *e'*, oscillating bar *D*, pitman *D'*, with the wheels *E h j*, and

band *h'*, when arranged to operate in the manner and for the purpose substantially as described.

2. The combination of the rock-shaft *C*, treadle *C'*, having arm *c*, with the bar *D*, hand-rod *e*, guide *e'*, pitman *D'*, and wheel *E*, when arranged to operate in the manner and for the purpose described.

3. The brake *b*, when constructed and arranged to operate in the manner and for the purpose described.

WILLIAM WELLINGTON.

Witnesses:

C. F. MILLER,

H. P. STOCKTON.