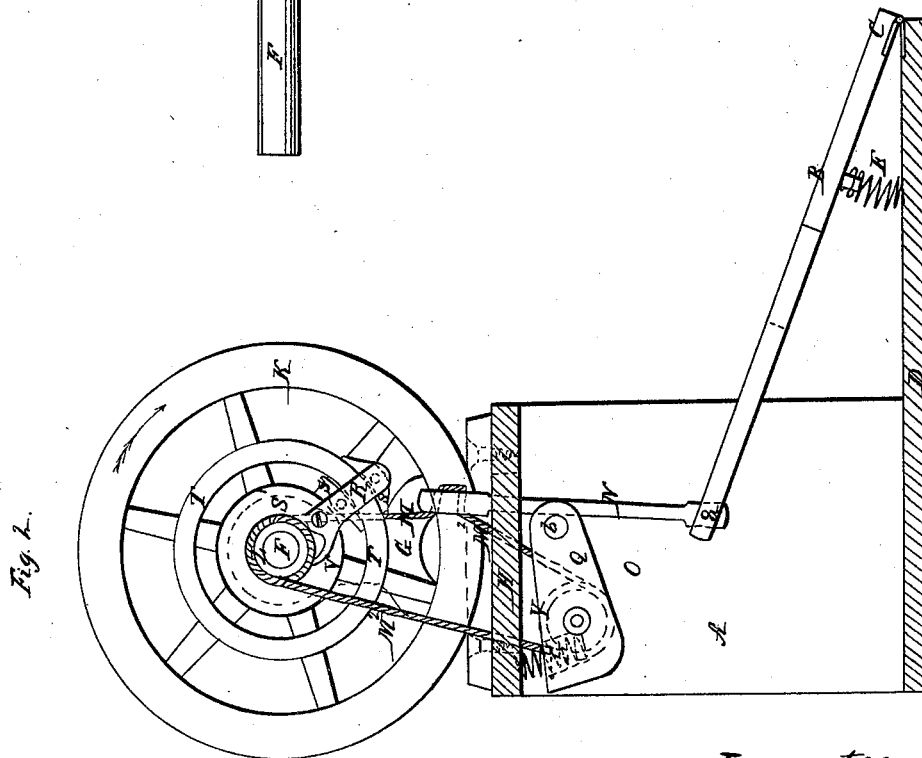
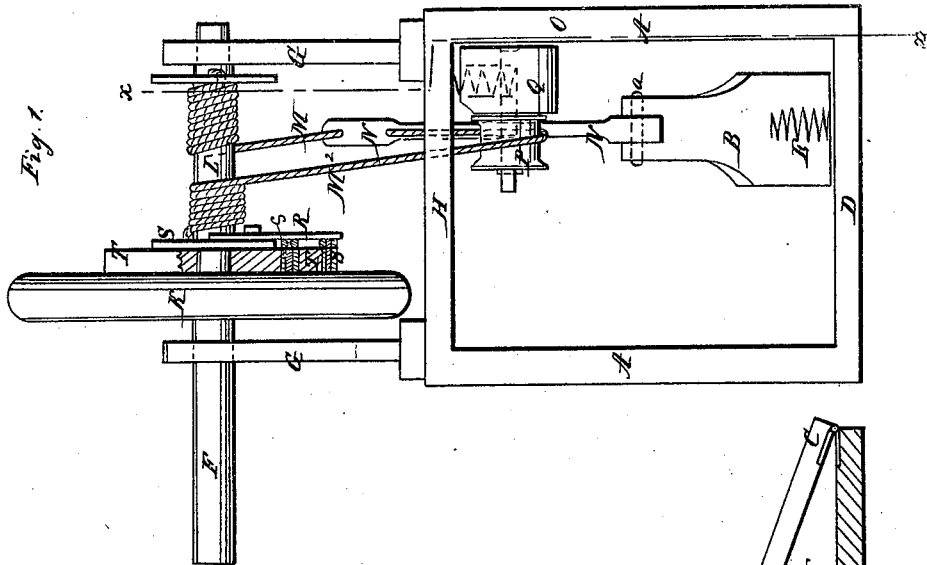


E. P. Ryder,

Treadle.

N^o 53,046.

Patented Mar. 6, 1866.



Inventor:

Witnesses:

J. H. B. Livingston
For A. Service

E. P. Ryder
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Attys

UNITED STATES PATENT OFFICE.

E. P. RYDER, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN TREADLE-MOTIONS.

Specification forming part of Letters Patent No. 53,046, dated March 6, 1866.

To all whom it may concern:

Be it known that I, E. P. RYDER, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Treadle-Motion for Sewing and other Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

The present invention consists in connecting the treadle to and with the driving-shaft of the machine through a novel arrangement of parts, by means of which the liability of turning of the driving-shaft in the wrong direction when the machine is started is entirely obviated, as will be hereinafter particularly described.

In the accompanying plate of drawings my improvement in treadle-motion is illustrated, Figure 1 being a view of the back side of the stand or frame upon which my treadle-motion is arranged; Fig. 2, a transverse vertical section taken in the plane of the crooked line *xx*, Fig. 1.

Similar letters of reference indicate like parts.

A in the drawings represents a stand or frame, upon which, for illustration, my arrangement and connection of the treadle are shown; B, the treadle, hinged at one end, C, to the bed D of the stand A, resting upon a spiral or coiled spring, E; F, the driving-shaft, hung and turning in bearings of the parallel vertical standards G G of the platform H of the stand A; K, a balance-wheel secured to shaft F.

On driving-shaft F is a loose sleeve or collar, L, to which at each end are secured cords or straps M M², each of which is partially coiled or wound around the said sleeve L, and the strap M then secured or fastened in the upper end of a pitman rod or arm, N, hung by its lower end upon a pivot, *a*, in the slotted end of the treadle B, the strap M² being also secured to the same pitman-rod and at the same end, but passing around a friction roller or pulley, P, hung in a spring lever-arm, Q, turning upon a fulcrum at *b* of upright or side piece, O, of the stand A.

R is a radial arm or pawl, hung by its inner end to the flange or raised lip S upon one end of the shaft-sleeve L. To the outer end of the pawl R are hung two similar swinging or swiveled jaws, *s s*, one upon each side of the annular ring T, fixed to one side of the balance-wheel K and concentric therewith, which ring is embraced by the said jaws and carried around with them as the pawl on which they are hung is made to move forward by the depression of the treadle with the foot, through the connecting parts above explained, when, the treadle rising, the jaws pass freely backward over the surface of the ring T, against which they again bear as the treadle is again depressed, and so on, thereby imparting a continuous rotary movement to the driving-shaft, the cords M M² respectively, and alternately unwinding from and winding upon the shaft-sleeve L, to which they are fastened.

To prevent the jaws *s* from grasping the annular ring T in such a manner as to turn the driving-shaft F in the wrong direction, I have formed upon the back side of the pawl R an arm, V, of sufficient length that, by abutting against and resting upon the shaft-sleeve L, the jaws cannot then come to a bearing upon the annular ring T, but by moving the pawl in the opposite direction the said jaws will instantly seize the ring, as is obvious by an examination of the drawings and without further explanation.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of the pitman-rod N, hung to the treadle of a sewing or other machine, cords M M², connecting said rod with a loose sleeve or collar, L, of the driving-shaft, and pawl R, hung on said sleeve, which, through jaws *s*, acts upon the fixed annular ring T of the driving-shaft, arranged together and so as to operate substantially in the manner and for the purpose described.

The above specification of my invention signed by me this 3d day of January, 1866.

E. P. RYDER.

Witnesses:

THEO. LUSCH,
ALBERT W. BROWN.