

J. TISDALE.

Clutch Mechanism for Treadles for Sewing-Machines.

No. 135,297.

Patented Jan. 28, 1873.

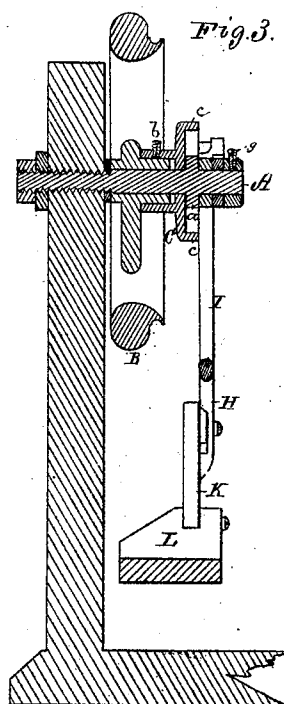
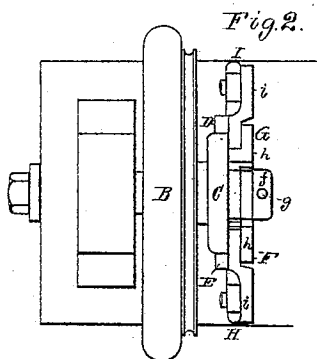
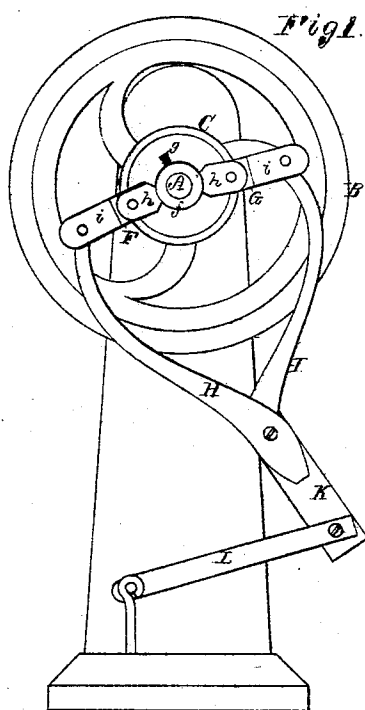
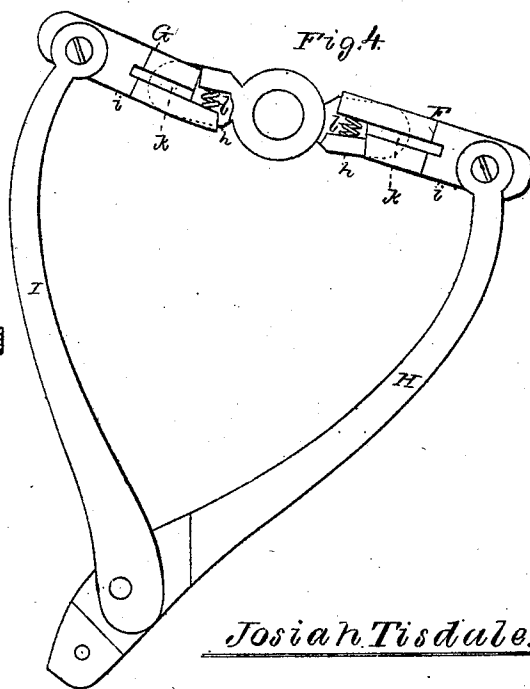
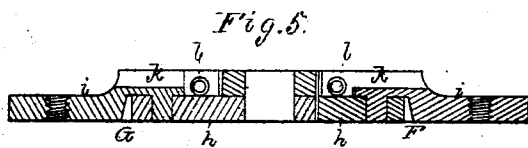
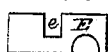


Fig. 6.



Fig. 7.



Witnesses.

J. W. Piper.

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by his attorney

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UNITED STATES PATENT OFFICE.

JOSIAH TISDALE, OF NORWOOD, MASSACHUSETTS, ASSIGNOR TO HIMSELF
AND JOHN PUTNAM, OF SAME PLACE.

IMPROVEMENT IN CLUTCH MECHANISMS FOR TREADLES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **135,297**, dated January 28, 1873.

To all whom it may concern:

Be it known that I, JOSIAH TISDALE, of Norwood, of the county of Norfolk and State of Massachusetts, have invented a new and useful or Improved Treadle Attachment for revolving the fly-wheel of a sewing or other machine; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing.

Figure 1 is a front elevation, Fig. 2 a top view, and Fig. 3 a transverse section of it as applied to a driving-pulley fly-wheel. Fig. 4 is a rear view of the two connecting-rods and jointed radial arms. Fig. 5 is a horizontal section of the said radial arms. Figs. 6 and 7 are views of the two grippers of the jointed radial arms.

The mechanism hereinafter explained is to effect, by means of a treadle, a continuous revolution of a wheel or pulley in one and the same direction, such being to avoid the loss of power and the dead-points resulting from the use of a crank when employed to revolve such wheel or pulley.

In such drawing, A denotes a stationary arbor provided with an annular shoulder, *a*, fixed firmly to or being in one piece with the arbor. Concentrically on the arbor is the band-pulley fly-wheel B provided with a flanged disk, C, whose hub encompasses that of the wheel B, and is held thereto by a clamp-screw, *b*. The disk C has a flange, *c*, extended from one side of it and around its periphery, as shown. The two grippers D E, exhibited in Figs. 6 and 7, are provided with notches *ee* to receive the said flange *c*, with which they are arranged in manner as shown, each being placed within one of two jointed radial arms F G. The said two arms are pivoted upon the arbor, turn freely thereon, and are held in place by a collar, *f*, provided with a set-screw, *g*. The said arms are also jointed to two rods H I connected to a link or bar, K,

pivoted to a treadle, L, all being as shown. Each of the arms F G is composed of two parts, *h i*, constructed and pivoted together as represented, both being grooved lengthwise, as seen at *k*, to receive one of the grippers. Furthermore, between the two parts *h i* of each arm a helical spring, *l*, is disposed, as shown in Figs. 4 and 5. When the treadle is vibrated or put in movement on its fulcrum so as to raise the two jointed arms the outer part *i* of one of them will be so turned on its joint-pins as to tip the griper and cause it to bind as a brake on the flange *c*, and in a manner to affect a rotary movement of such flange and the disk and fly-wheel. At the same time the two jointed parts *h i* of the other arm, by being in one straight line with each other, prevent the other griper from operating to turn the flange in the reverse direction, the spring *l* operating at the proper time to turn the arms into an angle with each other, so as to set the griper for action to gripe the flange in its turn; but during descent of the two arms F G the griper that may be out of action on the flange will be thrown into action upon it, the other griper being kept out of action. Thus a continuous rotation of the wheel in one direction will be effected.

I claim—

1. The grippers D E, the springs *l l*, and the jointed arm parts *h i h i*, constructed, arranged, and combined together and applied to a shaft-flanged disk and treadle, in manner and by means substantially as described.

2. The stationary shouldered arbor, the band-wheel, the flanged disk, the jointed arms F G, the grippers D E, and springs *l l*, arranged, constructed, and combined substantially in manner and to operate as shown and described.

JOSIAH TISDALE.

Witnesses:

R. H. EDDY,
J. R. SNOW.