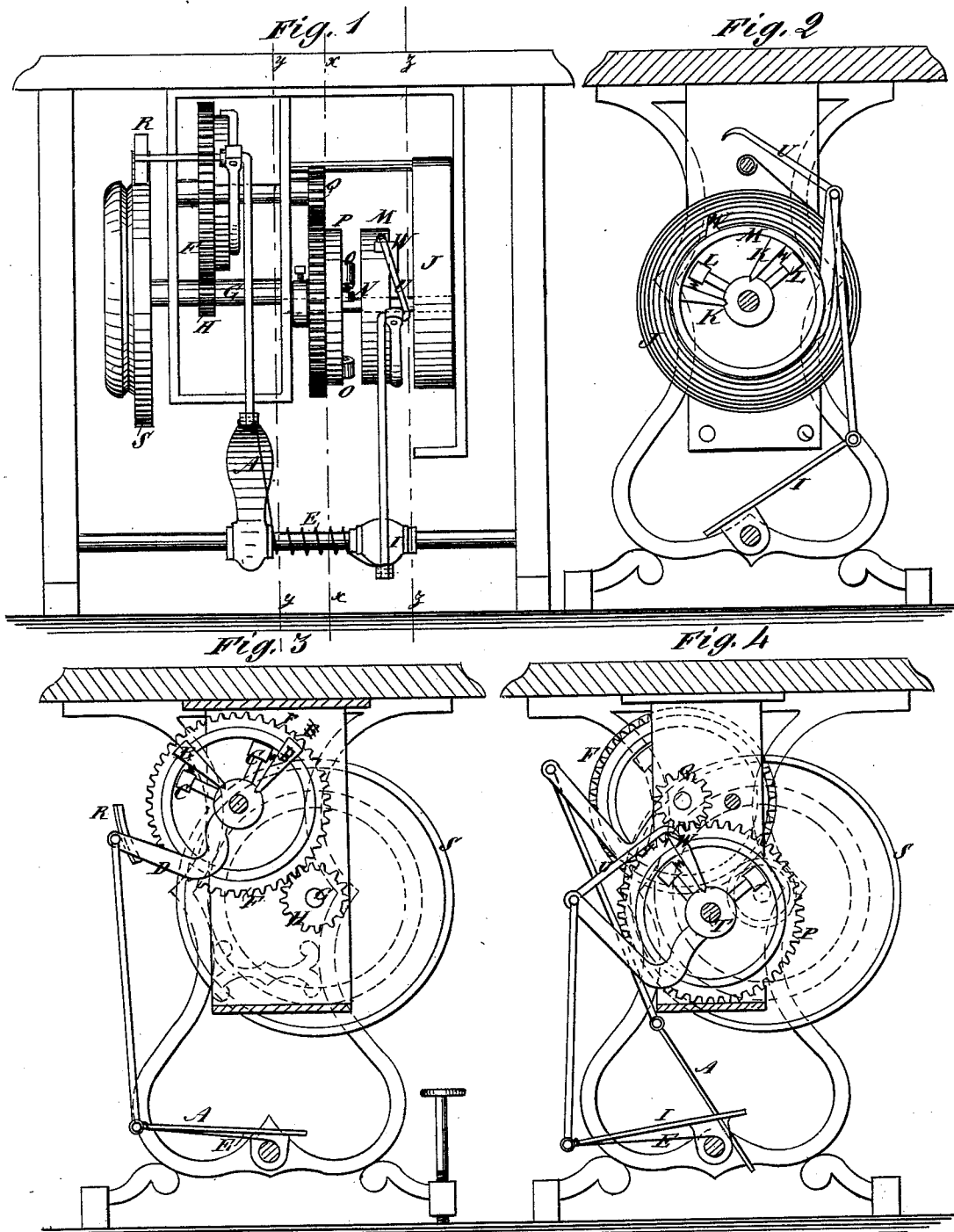


J. H. MORLEY.

SPRING-POWER AND TREADLE FOR SEWING-MACHINES.

No. 176,543.

Patented April 25, 1876.



WITNESSES:

C. Nevens
John Goethals

INVENTOR:

J. H. Morley
BY *Mumford*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES H. MORLEY, OF HOLYOKE, MASSACHUSETTS.

IMPROVEMENT IN SPRING POWERS AND TREADLES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **176,543**, dated April 25, 1876; application filed March 25, 1876.

To all whom it may concern:

Be it known that I, JAMES H. MORLEY, of Holyoke, in the county of Hampden and State of Massachusetts, have invented a new and Improved Sewing-Machine Power, of which the following is a specification:

I propose to employ one of the treadles of the machine for the direct application of the power in light work, and the other treadles for winding up a power-spring, to apply additional power when required to run the machine in heavy work.

Figure 1 is a side elevation of my improved machine. Fig. 2 is a section on line *x x*. Fig. 3 is a section on line *y y*, and Fig. 4 is a section on line *z z*.

Similar letters of reference indicate corresponding parts.

The treadle A is alone employed for driving the machine for light work, and operates it by the friction-pawls B C and arm D, and is raised by the spring E. The toothed wheel F is turned by the friction-pawls, and it turns the band-wheel shaft G by the pinion H. The wheel F will continue to turn in the direction in which it is set in motion by the friction-pawls, without obstruction by the latter. The clutch only engages the wheel when pulled forward relatively to the wheel.

The other treadle, I, is employed to wind up the power-spring J, to be used either alone or in connection with the foot-treadle A, for driving the machine when more power is required for heavier work. This treadle winds the spring by the friction-pawls K L and wheel M, and the spring gears onto the band-wheel shaft by the friction-pawls N O, toothed wheel P, and the pinion Q, gearing with the shaft of wheel B.

The foot-treadle I operates a detach-er, U,

which engages a projection, W, and releases the pawls K L from the wheel M when the spring is to be allowed to act with its full power. The treadle A works a brake, R, upon the face of the balance-wheel S for stopping the machine. The spring J may be wound up at the same time that it works the machine by working the treadle I, or it may be entirely wound up and allowed to work in the ordinary way. The spring-power will operate the machine alone, if it is desired not to work the treadle A.

The contrivance is alike applicable to lathes and other light machines worked by foot-power.

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

1. The combination of a foot-power and spring-power in a sewing or other light machine, substantially in the manner described.
2. In a machine having a combined foot and spring power, one of the treadles connected to the machine for working it directly, and the other connected to the spring-power for winding it up, substantially as specified.
3. The spring-power shaft T, geared to the foot-power mechanism by friction-pawls N O and wheel P, substantially as specified.
4. The foot-treadle I, geared to the spring-power shaft by the friction-pawls L L and wheel M, substantially as specified.
5. The combination of the detach-er U with foot-treadle I and the friction-pawls K L, substantially as specified.

JAMES H. MORLEY.

Witnesses:

JOHN OSGOOD,
E. F. TEFTS.