W. W. WILLIAMS & N. S. WAKEFIELD.

FEED MECHANISM FOR SEWING MACHINE.

No. 182,879. Patented Oct. 3, 1876.

*Fig. 1.*

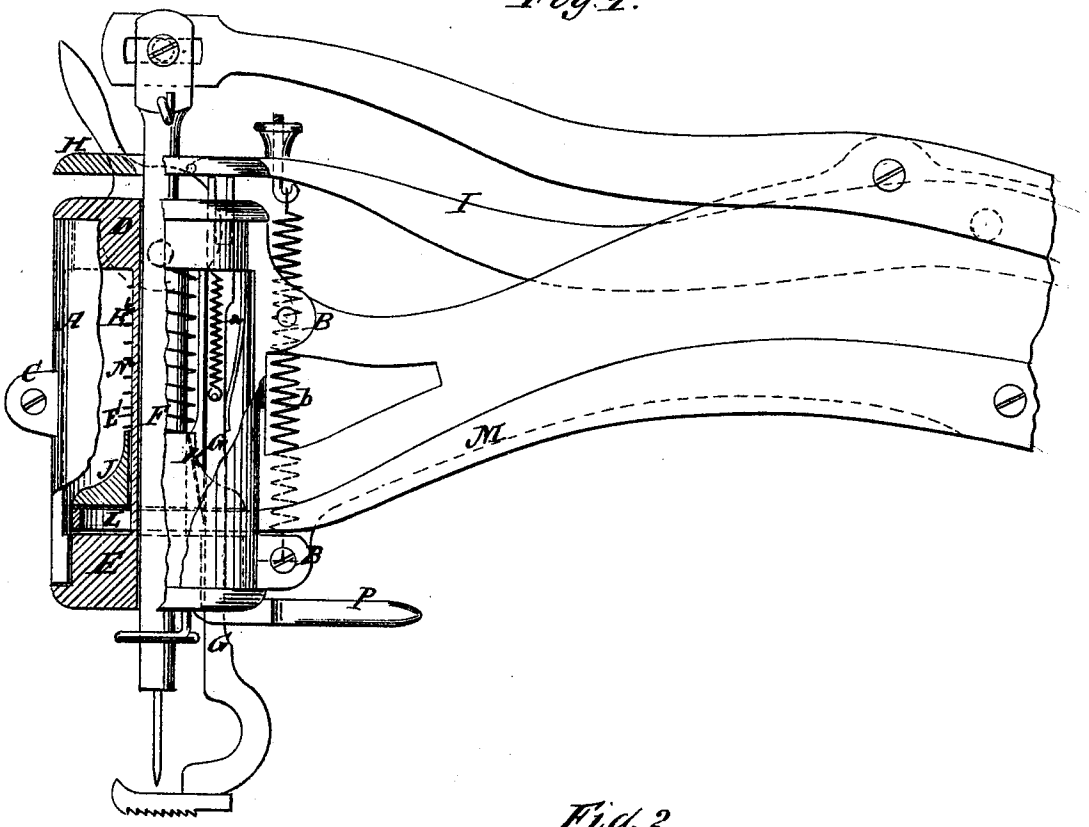
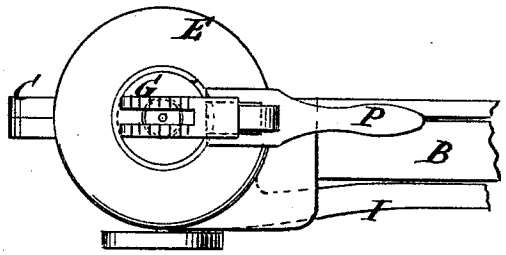



*Fig. 2.*

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WILLARD W. WILLIAMS AND NATHAN S. WAKEFIELD, OF CAMDEN, N. Y.

## IMPROVEMENT IN FEED MECHANISMS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **182,879**, dated October 3, 1876; application filed April 18, 1876.

*To all whom it may concern:*

Be it known that we, WILLARD WATSON WILLIAMS and NATHAN STOEL WAKEFIELD, of Camden, Oneida county, New York, have invented certain Improvements in Sewing-Machines, of which the following is a specification:

Our invention is an improvement on the machine patented by James, Joseph, Edward, and Wm. Pitt, No. 117,203, July 18, 1871; the object being to provide such a construction and arrangement of parts as will admit of the continuous turning of the feeding-foot (to change the direction of its horizontal movement) around the needle-bar, so that it may be turned to the extent of a whole or a number of circles in either direction, as will be more fully described hereinafter.

Figure 1 is a side elevation, partly in section, and Fig. 2 is an inverted view of our invention.

A represents a suitable cylinder, which is made in two parts, and designed to be secured together by means of the screws and ears B C. The two heads of this cylinder are made separate therefrom, and are united together by means of a tube or sleeve, E′, through which the needle-bar F passes.

Passing down through this cylinder to one side of the needle-bar is the feed-foot G, the upper end of which is held pressed upward against the head H of the lever I by a spring, *a*, which lever I is held pressed downward by the coiled spring *b*.

Placed inside of the cylinder A is the conical sleeve J, which is made nearly as large as the inside diameter of the cylinder, and which as a hole through its center for the passage of the tube or sleeve E′, and a slot through one side for the passage of the feed-foot G, the incline K being at the bottom of said slot. Between the top of this sleeve J and the head D is placed a coiled spring, N, which holds the sleeve pressed down on top of the ring L formed on the front end of the regulating-arm M. This ring L is placed wholly inside of the cylinder A, and has both the needle-bar F and feed-foot G operating inside of it. Where this ring is not enlarged sufficiently to allow the feed-foot G to operate inside of it, as here shown, the two heads D E, which are turned by means of the handle P, and carry the feed-foot G around with them, can be turned only about one-half around, when the thread has to be cut, the work taken off the horn, reversed, then put on again, and the machine again started.

By means of the arrangement of parts here shown, continuous circles can be sewed in either direction, and thus the range of the machine more than doubled.

Having thus described our invention, we claim—

The combination of the two heads D E, connected by the sleeve E′, through which the needle-bar passes, the conical sleeve J, slotted to receive the feed-foot G, the arm M, provided with the ring L, said ring being placed inside of the cylinder A, and the feed-foot operated within the ring L by the sleeve J, substantially as and for the purpose set forth.

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