

F. SPOEHR.

Mechanism for Operating the Feeding Wheel in Sewing Machines.

No. 101,779.

Patented April 12, 1870.

Fig. 1.

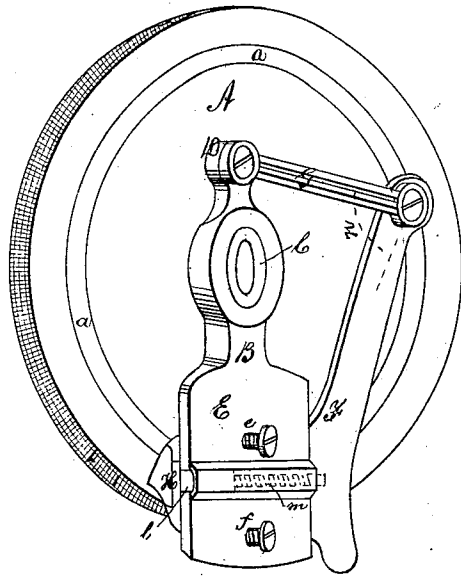
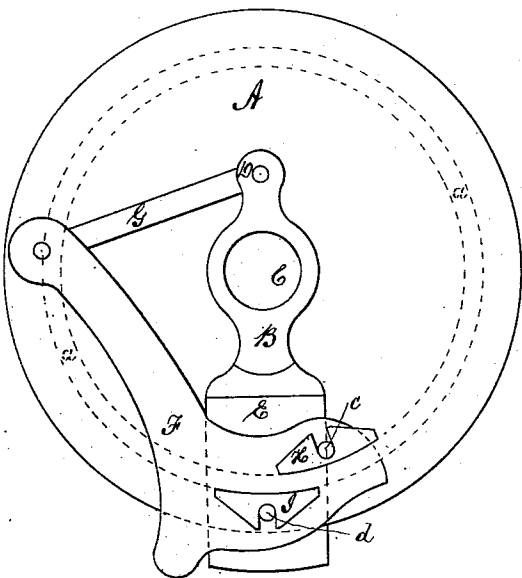
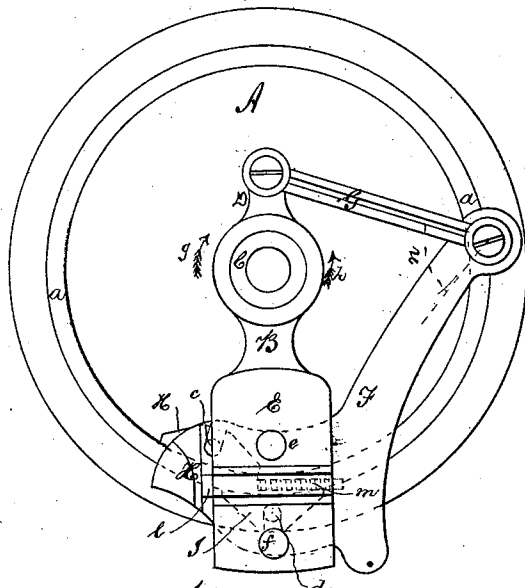


Fig. 2.



Witnesses
Louis A. Meates.
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Fig. 3.



Inventor
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United States Patent Office.

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Letters Patent No. 101,779, dated April 12, 1870.

IMPROVEMENT IN MECHANISM FOR OPERATING THE FEEDING-WHEEL IN SEWING MACHINES.

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

To all whom it may concern:

Be it known that I, FRIEDRICH SPOEHR, of the city and county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in the Feed-motion of Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying sheet of drawings, and to the letters of reference marked thereon, in which—

Figure 1 is a perspective view;

Figure 2 is a front view; and

Figure 3 is a back view.

Similar letters refer to similar parts in the several views.

A is the feed-wheel of a sewing-machine. Turning independently on its hub, by means of suitable mechanism, is a driver, constructed and operated as follows:

A driving-piece, B, which turns independently on the hub C of the feed-wheel, has a crank-end, D, and an adjusting holding-down plate, E, on opposite ends.

The crank-end is jointed to a shoe-feed lever, F, by an intermediate lever, G, forming such an angle that the action of the crank on it will not be lost.

The shoe-lever has the shoes H I on opposite sides of the flange *a* of the feed-wheel, fig. 3. Their surfaces of contact exactly coincide with the inner and outer surfaces of the flange. They are confined in their relative positions beneath the shoe and feed-lever, and receive its motion by means of the downwardly-projecting pins *c d*, which take into suitable openings in the shoes.

The shoe-lever is prevented from lifting by the set-screws *e f* of the end E of the driving-piece B.

When the driving-piece B is turned on the hub of the feed-wheel in the direction of the arrow *g*, the intermediate connecting-lever G forces or pushes the shoe and feed-lever F and its shoes around the flange

a of the feed-wheel, which is accomplished without the shoes pinching the flange; but when it is turned in the direction of the arrow *h*, the intermediate connecting-lever pulls the shoe and feed-lever after it, which tilts its lower end and causes the shoes to firmly bite or press on the flange *a*, and carry the feed-wheel in the same direction.

The feed-wheel of a sewing machine must necessarily have an intermittent rotary motion. It will be readily seen that the driver-mechanism produces the same when vibrated respectively in the direction of the arrows *g h*.

The wear of the shoes against the flange *a* is taken up by means of a bolt, *l*, and spiral spring *m*, placed in a suitable opening in the end E of the driver B; as they wear, the spring forces the bolt against the projection H of the shoe and feed-lever, which increases the distance between the end E and the said projection, and also increases the angle *n*, formed by the shoe-feed lever and the intermediate connecting-lever G, which causes a greater tilt in the shoe-lever when turning in the direction of the arrow *h*.

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

1. The feed-wheel A, driving-piece B, shoe and feed-lever F, shoes H I, and the intermittent lever G, when constructed and arranged substantially as shown.

2. The driving-piece B, in combination with the bolt *b*, spring *m*, shoe and feed-lever F, shoes H I, and the pins *c d*, as shown.

In testimony whereof I hereunto sign my name to this specification in presence of two subscribing witnesses.

FRIEDRICH SPOEHR.

Witnesses:

FRANCIS D. PASTORIUS,
WILLIAM BROSCHE.