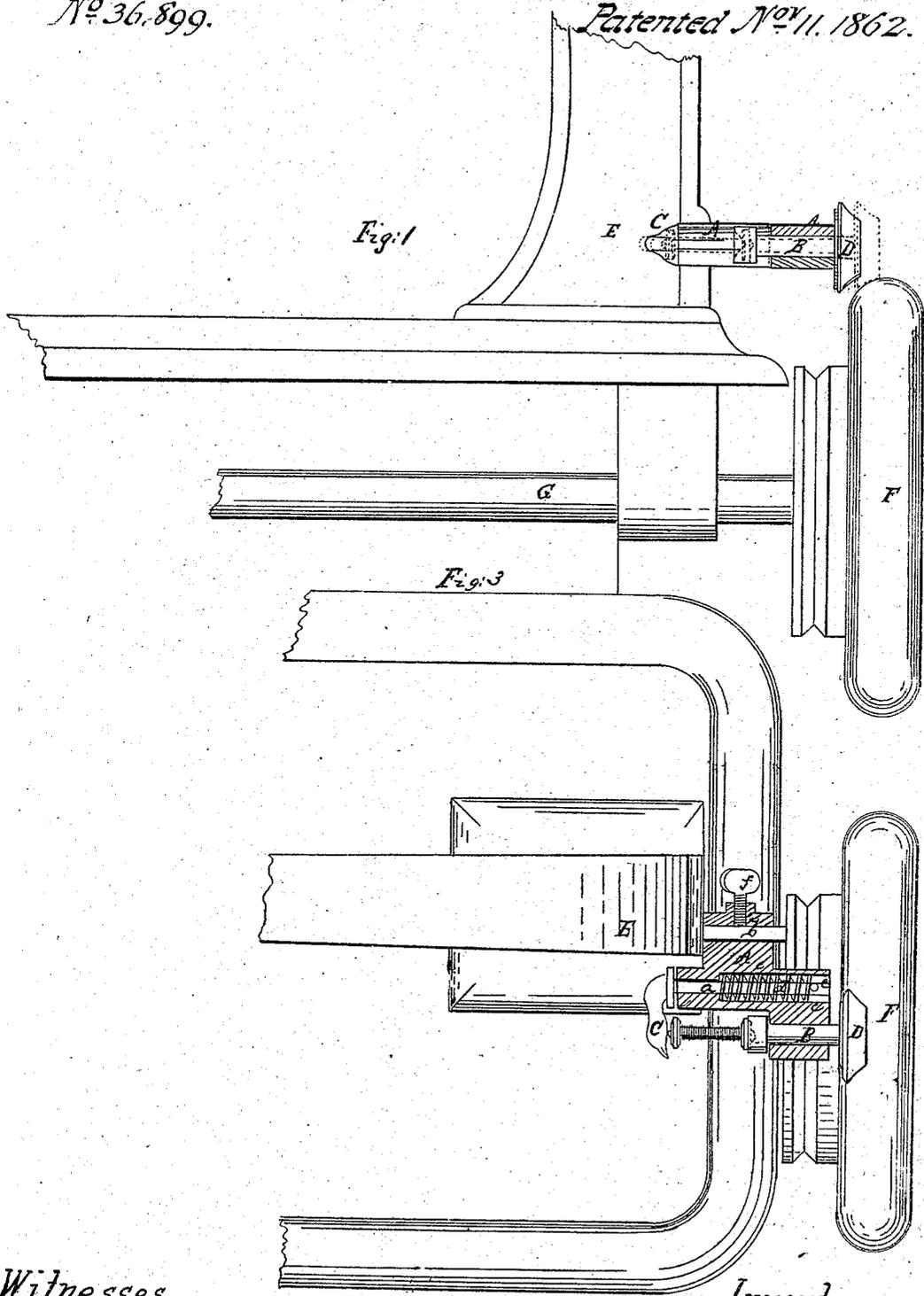


M. Finkle,
Sewing Machine.

No. 36,899.

Patented Nov. 11, 1862.



Witnesses.
James Laird
Manufacture

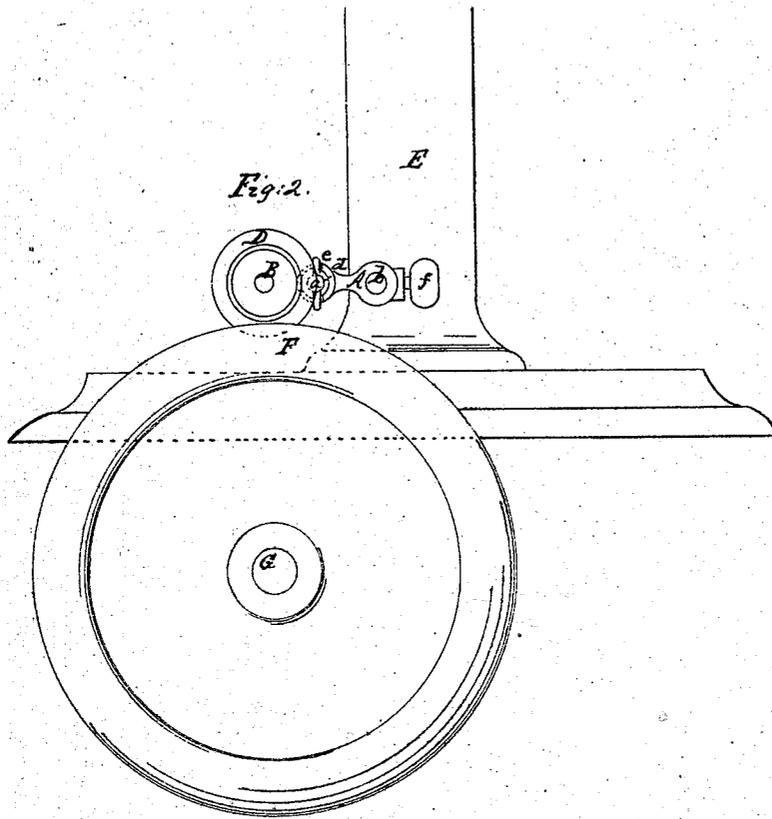
Inventor.

Milton Finkle

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Milton Finkle

UNITED STATES PATENT OFFICE.

MILTON FINKLE, OF NEW YORK, N. Y.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 36,899, dated November 11, 1862.

To all whom it may concern:

Be it known that I, MILTON FINKLE, of the city, county, and State of New York, have invented certain new and useful Improvements in Spoolers or Bobbin-Winders for 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 drawings, forming part of this specification, in which—

Figure 1 is a front view, partly in section, of a spooler constructed according to my invention, showing its application to a sewing-machine. Fig. 2 is a side view of the same. Fig. 3 is a plan, showing the spooler in section.

Similar letters of reference indicate corresponding parts in the several figures.

My invention relates to the driving of a spooler or bobbin-winder without a band by the friction of a pulley or roll attached to the spindle of the spooler and bearing against the fly-wheel or other wheel or pulley of the sewing-machine.

It consists in a certain mode of applying the spooler or winder to the sewing-machine, which provides for its proper adjustment relatively to the wheel or pulley by which it is driven.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A is the frame or stock of the spooler, which carries all its movable parts, consisting of a single piece of metal, the form of which is best represented in Fig. 3. This stock is bored right through in three places, as shown in the above-mentioned figure—viz., in one place for the reception of the main spindle B, in another for the reception of the stem *a* of the movable center C, and in a third for the reception of the fixed horizontal pin *b*, attached to the stationary arm E of the sewing-machine, the three bores being parallel with each other. The middle bore, which receives the stem *a*, is counter-bored, as shown at *c c* in Fig. 3, for the reception of a spring, *d*, which is coiled round the said stem, and which presses against a pin, *e*, inserted transversely through the said stem for the purpose of drawing the movable center C toward the main spindle.

D is the friction roll or pulley secured to the outer end of the main spindle B, having its

peripheral surface of suitable form to fit against the surface of the fly-wheel F of the sewing-machine, and having said surface covered with india-rubber or other substance which will produce friction upon or adhere to the said wheel. The inner end of the main spindle is made of the usual cup shape for the reception of one of the heads of the bobbin or spool, but may be made of any suitable form for driving the bobbin or spool. The said spindle is allowed a limited longitudinal movement for the purpose of bringing the roll or pulley D into and out of contact with the wheel F.

The fixed pin *b* is suitably arranged to permit the roll or pulley D, when the spooler is placed on the said pin, to come in contact with the wheel F. The said pin is arranged parallel with the main shaft G of the sewing-machine, on which the wheel F is placed, and hence when the spooler is placed on it the main spindle B will be parallel with the shaft of the sewing-machine. The back part of the stock A is tapped and fitted with a set-screw, *f*, to secure it to the pin *b*, upon which the stock is capable of swinging vertically, as well as moving longitudinally to adjust it in proper relation to the wheel F when the said set-screw is unscrewed. When the stock A has been properly adjusted the placing of the spool or bobbin H between the main spindle and movable center causes the pressure of the spring *d*, acting against the pin *e*, to force the movable center C against the spool or bobbin and hold the latter up to the main spindle B, and the said pressure, being transmitted through the spool or bobbin to the spindle B, presses the friction roll or pulley D against the wheel F, as shown in Fig. 3 and in red outline in Fig. 1, with sufficient force for the latter to drive it. When the spool or bobbin is removed from between the main spindle B and movable center C there is nothing to hold the roll or pulley D against the wheel F, and hence it works itself free of the said wheel, as shown in black outline in Fig. 1.

By applying the spring *d* to serve the two purposes herein described the spooler or winder is brought to an operative condition by the mere act of putting in the bobbin or spool, without the trouble of throwing on a band or any other action, and is caused to be always

in an operative position while there is a spool or bobbin in it; and when the bobbin is removed from it it becomes at once free of the driving-wheel or pulley without the trouble of throwing off a band or any manual adjustment.

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

The arrangement of the spooler or bobbin-

winder to swing and also to move longitudinally on a fixed pin attached to the sewing-machine and occupying a position parallel with the shaft of the machine, by which the spooler or winder is driven, substantially as described.

MILTON FINKLE.

Witnesses:

JAMES LAIRD,

M. M. LIVINGSTON.