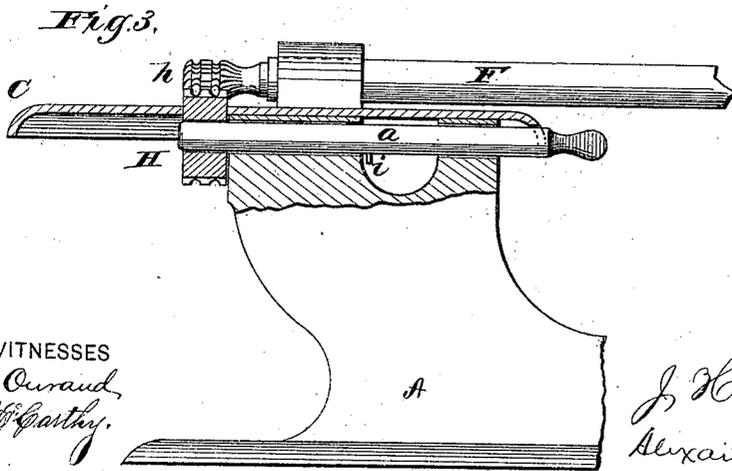
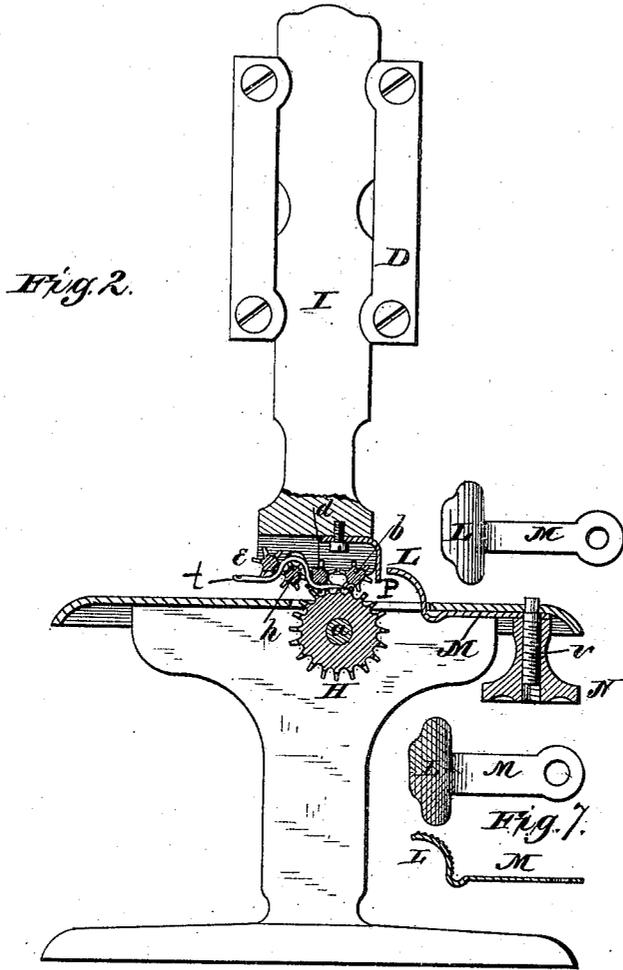


J. HEBERLING.
Running-Stitch Sewing-Machine.

No. 227,525.

Patented May 11, 1880.



WITNESSES
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JOHN HEBERLING, OF MOUNT PLEASANT, OHIO, ASSIGNOR TO HEBERLING
RUNNING STITCH SEWING MACHINE COMPANY, OF SAME PLACE.

RUNNING-STITCH SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 227,525, dated May 11, 1880.

Application filed May 5, 1879.

To all whom it may concern:

Be it known that I, JOHN HEBERLING, of Mount Pleasant, in the county of Jefferson, and in the State of Ohio, have invented certain new and useful Improvements in Running-Stitch Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to running-stitch sewing-machines of the character for which Letters Patent No. 204,604 were granted to me June 4, 1878; and the nature of my invention consists in certain improvements thereon, as will be hereinafter more fully set forth, and pointed out in the claims.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a front elevation, and Fig. 2 a transverse vertical section, of a running-stitch sewing-machine embodying my invention. Fig. 3 is a detailed section of the table and stand supporting the same. Fig. 4 is a horizontal section through the pinions *b d e*. Fig. 5 shows the mode of attachment of the pinion *h* to the shaft *F*. Figs. 6, 7, and 8 show modifications of a certain part of the machine.

A represents the base of the machine, with table *C* and frame *B*, the latter terminating in the head *D*.

F represents the driving-shaft, having its inner end passing over the table *C*, and upon its outer or rear end is secured the band or crank wheel *G*, to which the power may be applied in any suitable manner.

H is the large cog-wheel, working on a pin or shaft, *a*, in an opening in the table *C*.

I is the slide or sliding bar, movable vertically in the head *D* and held stationary by means of a set-screw, *J*. In the lower end of the slide *I* are mounted the pinions *b*, *d*, and *e*. *h* is the pinion secured in the inner end of the driving-shaft *F*.

The various pinions are arranged with relation to each other and with the cog-wheel *H*

so that when the slide is lowered the pinions *b d* will mesh with the cog-wheel *H* and the pinions *d e* mesh with the pinion *h*, on opposite sides thereof. The pinion *h* therefore drives the pinions *d e*, and through the pinion *d* the wheel *H* obtains its motion, and from this wheel the pinion *b* is rotated.

The shaft or pin *a*, upon which the cog-wheel *H* is placed, runs through the stand of the base *A*, which supports the table *C*, said stand forming the arms *K K*. The shaft *a* has a longitudinal groove, in which is placed a wire spring, *k*, one end whereof is bent and passed through a hole in the shaft, forming a stop, *i*, projecting between the two arms *K K*, for the purpose of preventing the shaft from being drawn out or pushed in too far, while the body of the spring creates friction in the bore through which the shaft passes, to prevent the shaft from becoming accidentally moved out of place when the machine is in operation. By pushing in the stop *i* the shaft *a* can be drawn entirely out when required.

The inner end of the main or driving shaft *F* is bored out or made hollow for a suitable distance, and in the bore is secured a transverse pin, *m*. The pinion *h* is formed on or with a spindle, *p*, which fits in the shaft *F*, and said spindle has on its inner end a tenon, *n*, with notch *x*. This tenon is to fit at the side of the pin *m*, and the notch then fits on or over the pin, thereby locking the pinion and spindle in position at the end of the shaft. This device holds the pinion securely in its place, and yet admits of the pinion being easily removed when required.

The cog-wheel *H* and the various pinions are all formed with one, two, or more circumferential grooves, *s s*, to receive the bent needles *t*. These needles are bent to fit over the pinion *h*, their point ends resting on the wheel *H*. When the slide *I* is lowered the pinion *e* holds down the eye ends of the needles, said ends projecting beyond said pinion *e*. The pinion *d* holds down the needles on the opposite side of the pinion *h*, while the pinion *b* is directly over the points of the needles, and acts as a feed-wheel to feed the goods onto the points of the needles. The grooves *s* in this latter pinion or feed-wheel *b* are cut down

sufficiently deep to form continuous cylindrical surfaces at the bottoms of said grooves, thus giving a smooth path or track for the point of each needle, so that under no circumstances can the needle-points catch during the operation of the machine.

In the practical working of this class of machines I have found that it is necessary to provide some means for spreading, smoothing, or evening the goods before they pass into the needles.

L represents such smoother, which is formed with a spring-shank, M, that passes down through a slot in the table C, and is placed over a bolt, *v*, in the under side thereof. A set-nut, N, is then screwed on the end of the bolt, whereby the smoother L may be adjusted up or down, as required. The smoother L is located in front of the pinion *b*, so that the goods must pass over the same and then turn down to enter between the wheels, and the smoother being attached to or formed with a spring-shank it will yield to any unevenness in the thickness of the goods.

Directly opposite the smoother L, on the side of the slide I, is attached a spring-plate, P, which aids in smoothing and evening the goods, the fabric passing over the one and under the other before reaching the needles and entering the machine.

It is evident that various modifications in the form or construction of the smoother may be made without departing from the spirit of my invention—as, for instance, the face of the smoother L may be made serrated, as shown in Fig. 7; or it may be made of wire, as shown in Fig. 6; or small rollers, wires, or pins *w* may be arranged, as shown in Fig. 8, for the goods to pass between before entering the machine, all, however, answering the purpose of smoothing and evening the goods.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is—

1. In a running-stitch sewing-machine, the combination of a series of grooved cog-wheels or pinions, one or more bent needles, and a grooved pinion or feed-wheel, *b*, for crimping and feeding the goods onto the point of the needle, the needle being arranged to have its point come near the center of the feed-pinion, and the grooves on said pinion being cut down to form smooth cylindrical surfaces at their bottoms, substantially as and for the purposes herein set forth.

2. The combination of the hollow-ended shaft F, provided with pin *m*, with the spindle *p*, provided with the pinion *h*, tenon *n*, and notch *x*, substantially as and for the purposes herein set forth.

3. The movable shaft *a*, having the longitudinal and transverse grooves, and the spring *k*, placed in said grooves with its end passed through a hole in the shaft to form the stop *i*, in combination with the arms K K, slotted table C, and cog-wheel H, substantially as and for the purposes herein set forth.

4. In a running-stitch sewing-machine having a series of cog-wheels or pinions, and one or more bent needles, the pinions being arranged to crimp and feed the goods to the needles, the combination, with said pinions and needles, of the adjustable yielding smoother L and spring-plate P, constructed and arranged substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 5th day of May, 1879.

JOHN HEBERLING.

Witnesses:

C. L. EVERT,

J. J. MCCARTHY.