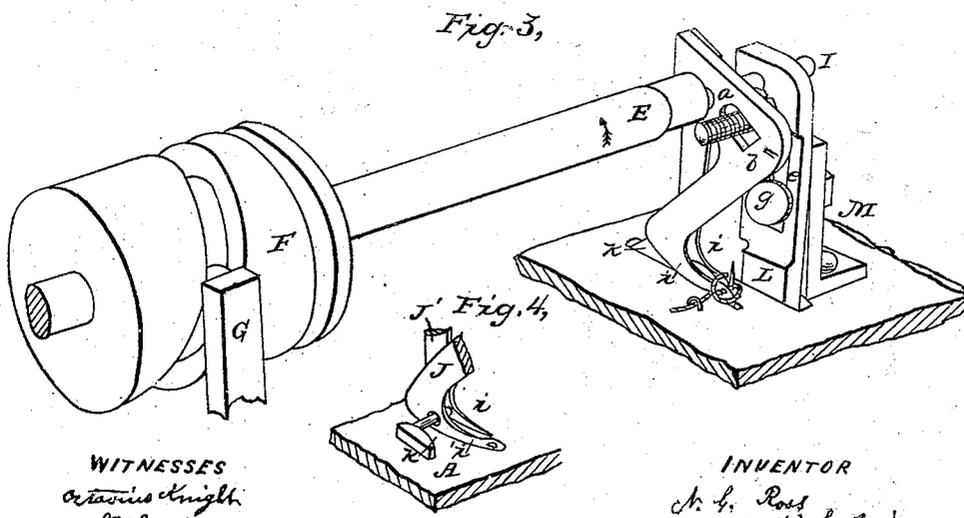
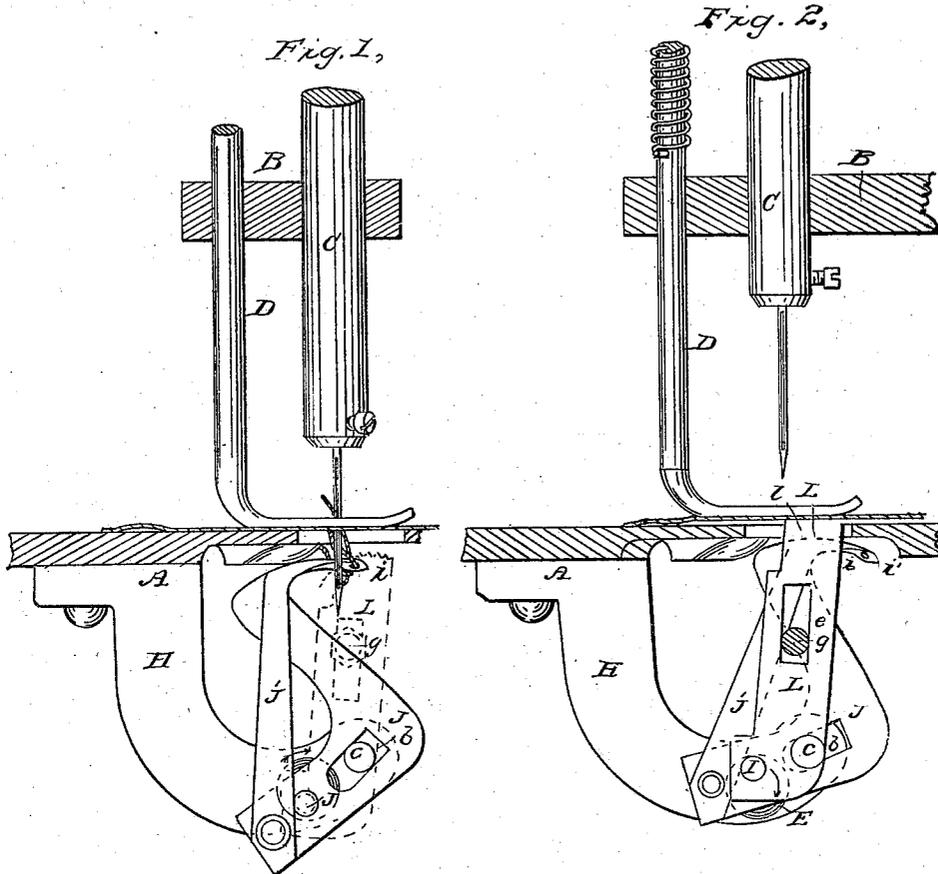


N. G. ROSS.
Sewing Machine.

No. 31,829.

Patented March 26, 1861.



WITNESSES
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UNITED STATES PATENT OFFICE.

NOBLE G. ROSS, OF CINCINNATI, OHIO.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 31,829, dated March 26, 1861.

To all whom it may concern:

Be it known that I, NOBLE G. ROSS, of Cincinnati, Hamilton county, Ohio, have invented certain new and useful Improvements in Sewing Machines; and I do hereby declare the following to be a full, clear, and exact description of the nature, construction, and operation thereof, reference being had to the annexed drawings, making part of this specification.

My invention relates to machines devised to form and work a double-loop stitch; and it consists in a looper so constructed and operated as to take the needle-thread at such distance below the fabric as to enable it to enter the upper loop in its most opened part and to spread its own loop and shed it so near the fabric as to insure the engagement of the needle in the lower loop with a comparatively short stroke of needle and slight wear of thread.

Figure 1 is a view of the machine with the looper in the act of taking the thread from the needle. Fig. 2 represents that position of the operative parts at which the feeder is brought into action. Fig. 3 is a perspective view of the under side of the machine with the looper spread to receive the needle and in the act of shedding its own loop.

A is the cloth-plate; B, a bracket, which projects from the stand-frame and serves to support and guide the needle-stock C and spring pressure-pad D.

E is the looper-shaft, carrying the needle-driving cam F. An arm, partly shown at G, connects the needle-stock C with the cam F. The part of shaft E near the sewing mechanism is supported by a bracket, H, and terminates in a wrist, I, which is set sufficiently eccentric to give the required movement both to the looper and the feeder. The looper J is a bent bar-hook, whose upper portion consists of a rigid and perforated finger, *i'*, and a flexible and imperforated finger, *i*. The middle portion of looper J has an oblique slot, *b*, which, when the machine is in action, enables the looper to slide, and at the same time oscil-

late upon a pin, *c*, which is fixed to a greater or less height upon the bracket H, according to the extent of oscillation desired for the looper. The lower end of the looper is journaled to crank-wrist I, and partakes of its circular motion. The wrist I and oblique slot *b* combine to give the upper or operative part of the looper a peculiar eccentric movement, the looper successively descending, advancing, ascending, and retreating, so as to engage the needle-loop some distance below the fabric and to receive the needle and shed its own loop as near as possible to the fabric.

K is a wedge-formed projection called the "spreader." The spring portion or flexible finger *i* of the looper in its retreating movement is opened by its contact with the spreader K, (either directly, as in Fig. 3, or by a projecting pin, as in Fig. 4,) so as to admit the upper needle between the fingers *i* and *i'* and insure the shedding and engagement of the lower loop.

The wrist I is also pivoted directly to the lower end of the feed-bar L, which bar has a vertical slot, *e*, adapted to traverse an adjustable fixed pin, *g*, when the machine is in motion, the wrist and slot combining to impart to the upper or operating end of the feed-bar a compound rocking and endwise motion adapted to impart the desired intermittent feed.

I claim herein as new and of my invention—

The obliquely-slotted looper J, adapted to traverse, when in action, a fulcrum, *c*, its lower end receiving a circular motion from a crank, I, and its upper end the described combined rocking and up-and-down motion, so as to enter the upper loop at its widest part and to shed its own loop near the cloth, in the manner and for the objects stated.

In testimony of which invention I hereunto set my hand.

NOBLE G. ROSS.

Witnesses:

GEO. H. KNIGHT,
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