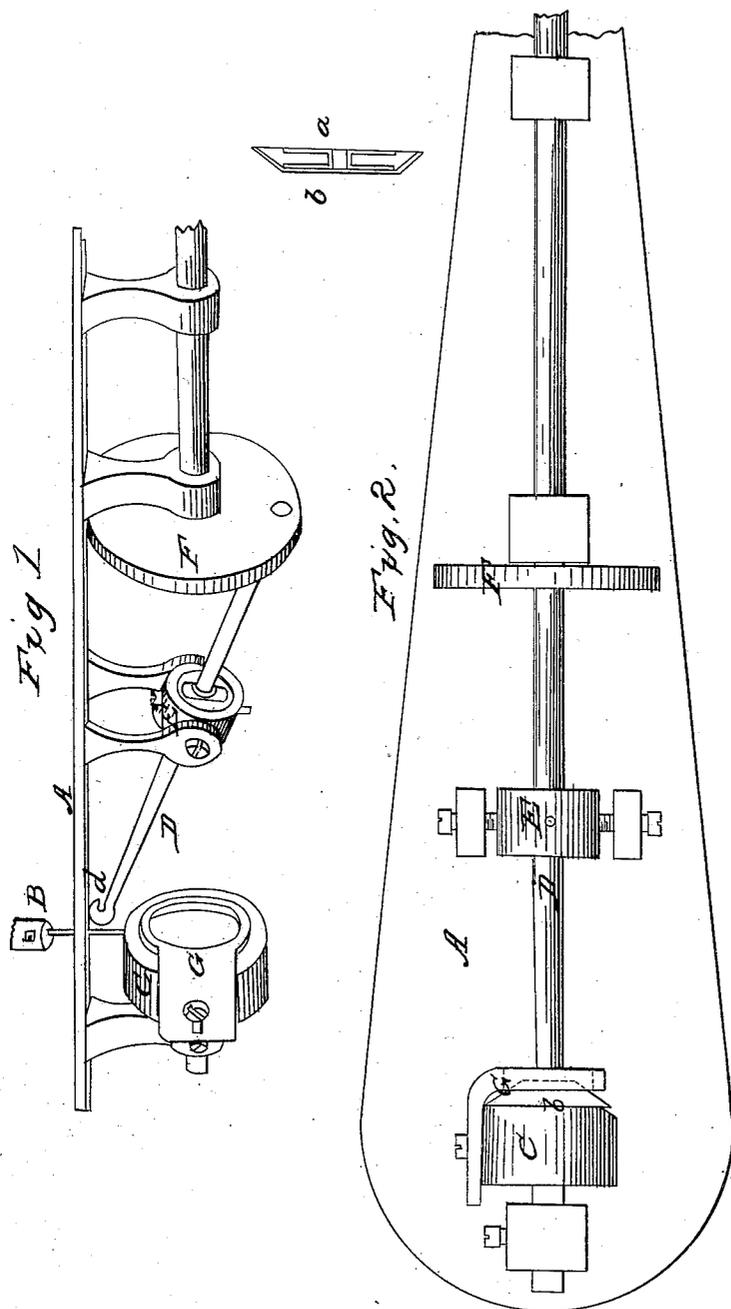


F. G. WOODWARD.

Sewing Machine.

No. 25,782.

Patented Oct. 11, 1859.



Witnesses:
Mary W. Woodward
W. L. Clark.

Inventor:
Francis G. Woodward

UNITED STATES PATENT OFFICE.

FRANCIS G. WOODWARD, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 25,782, dated October 11, 1859.

To all whom it may concern:

Be it known that I, FRANCIS G. WOODWARD, of Worcester city and county, and State of Massachusetts, have invented a new and useful Improvement in Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification.

Figure 1 is a perspective view; and Fig. 3 is a plan view, from below, of that part of the machine that contains my improvement.

A represents the plate that sustains the material to be stitched; B, the needle and a part of its carrier; C, the lower thread-case holder. This thread-case consists of a thin metallic bobbin, *a*, within a concave shell, *b*, Fig. 2. This shell has a fixed central stud upon which the bobbin *a* turns freely. This thread-case is held loosely to the face of the holder C by the cap G. D, Fig. 1, represents an arm that carries a hook, *d*, on one end. The other end enters (and works easily in) a hole near the edge of the wheel F. At a certain position between its ends this arm works in a universal joint, E, or otherwise a double joint that permits the ends of the arm to vibrate laterally in every direction, but does not admit of any longitudinal motion of the arm, neither does it admit of a rotation on its axis. It admits simply of a circular vibration of the hook *d* around the thread-case in G.

It operates as follows: The rotation of the wheel F causes the hook *d* to play around the edge of the thread-case, and in its motion it

catches a loop of the needle-thread and draws it over the thread-case in G, or at least it draws the loop so far over the case as to insure its being drawn entirely over and closely to the work by the extension of the next loop, thus interlocking the two threads, as in the shuttle-machine.

The novelty of this invention consists in the manner of working the looping-hook *d* by means of the wheel F and the double joint E. The object of this arrangement was to do away with the break or rubber that is required in the Wheeler & Wilson machine; and, secondly, it was deemed to be the most simple and durable of any arrangement heretofore known to effect the same object, except the Wheeler & Wilson invention. Unlike the S. C. Blodgett invention, (patent issued during the week ending September 7, 1858, assigned to G. B. Sloat & Co., of Philadelphia,) it has no compound motion, and the arrangement is much more simple and durable.

I do not claim working a hook around a stationary thread-case or bobbin; nor do I claim the idea of a hook working with its point always in the same direction.

What I claim as my invention and improvement in the sewing-machine is—

The peculiar manner of working the looping-hook *d* by means of the wheel F and the double joint E, substantially as specified.

FRANCIS G. WOODWARD.

Witnesses:

HENRY HAMMOND,
DAVID MCFARLAND, Jr.