

J. W. BARTLETT & F. PLANT.

Sewing-Machine.

No. 159,065.

Patented Jan. 26, 1875.

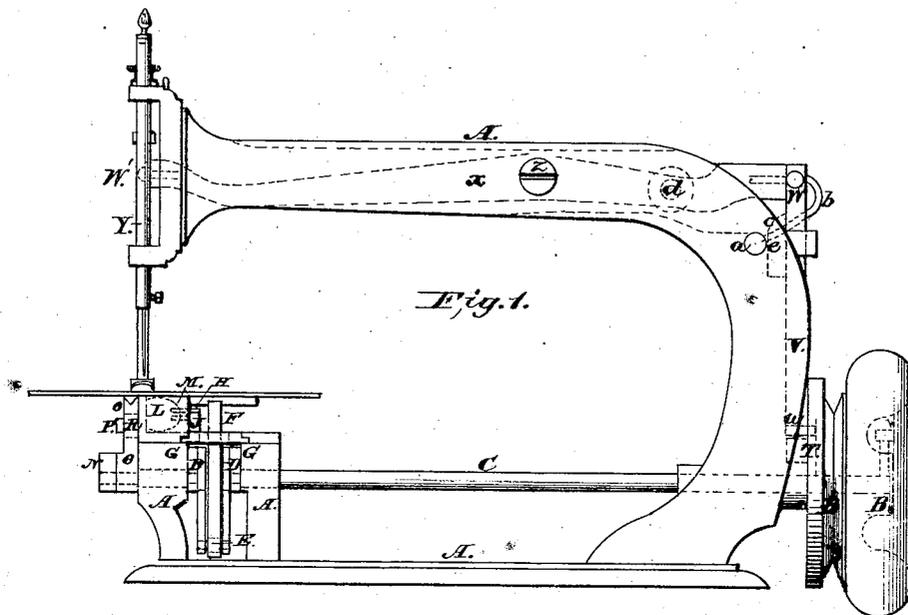


Fig. 2.

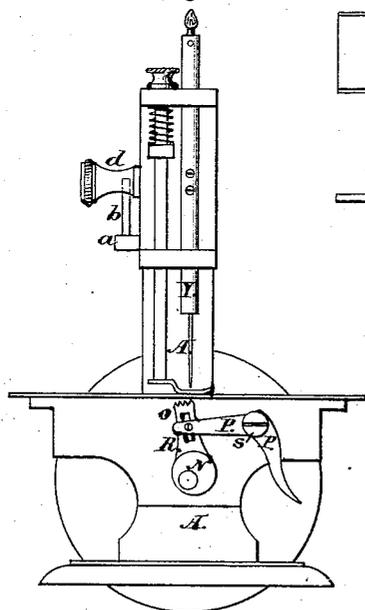


Fig. 4.

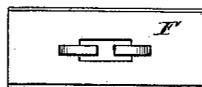


Fig. 5.

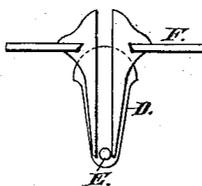
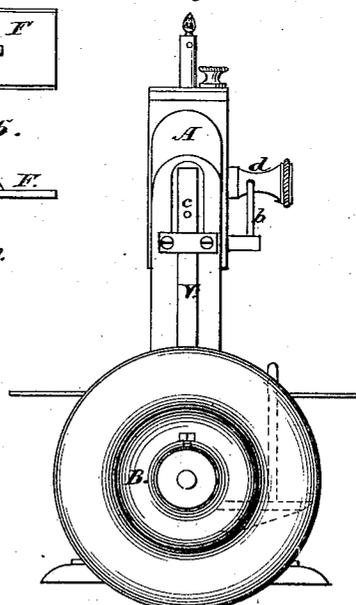


Fig. 3.



Witnesses:

John Matters,  
Chas Kelly.

Inventors.

Joseph W. Bartlett,  
Frederick Plant.

# UNITED STATES PATENT OFFICE.

JOSEPH W. BARTLETT, OF NEW YORK, N. Y., AND FREDERICK PLANT, OF BRICKSBURG, N. J.; SAID PLANT ASSIGNOR TO SAID BARTLETT.

## IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **159,065**, dated January 26, 1875; application filed March 28, 1874.

*To all whom it may concern:*

Be it known that we, JOSEPH W. BARTLETT, of the city, county, and State of New York, and FREDERICK PLANT, of the town of Bricksburg, Ocean county, and State of New Jersey, have invented certain Improvements in Sewing-Machines, of which the following is a specification:

The nature and object of our invention consists in a new and peculiar arrangement of parts of mechanism for the purpose of making the so-called lock-stitch in a sewing-machine, and with devices which enable the operator to sew with the fabric moving automatically toward or from him or her, as may be desired, simply by a reversion of the motion of the driving-shaft.

Figure 1 is a side elevation of the machine. Fig. 2 is a front elevation of the same. Fig. 3 is a rear end elevation of the same. Fig. 4 is a plan of the slide F. Fig. 5 is a side view of the slide F.

A is the frame of the machine; B, the driving-pulley; C, the driving-shaft; D, a double-armed crank; E, the crank-pin; F, a slide. G G are grooves. H and J are driving-arms of the shuttle. L is the shuttle; M, the shuttle-race; N, an eccentric, giving motion to the feed-bar O; P, a lever for regulating the feed; R, a pin, working within the slot in the feed-bar O; S, a screw, holding the lever P in place; T, an eccentric groove upon the inner face of the pulley B. U is a pin fixed to the connecting-rod V. W W' are joints, connecting the rod V with the arm X and needle-bar Y. Z is a pin, on which the arm X works. *a* is a movable rod inserted in the frame A. *b* is a thread take-up, fixed to the outer end of the rod *a*. *c* is the flat tapered pin fixed to the rod V. *d* is the tension-regulator; *e*, a pointed pin, fixed to the rod *a*.

The frame A of the machine is constructed of iron, and may be made in any form desired. Upon the driving-shaft C the driving-pulley B is fixed, by the movement of which in either direction (forward or backward) the

crank D is made to revolve, carrying with it the slide F and shuttle-carriers H and J. The eccentric N is fitted to the end of the driving-shaft C for the purpose of imparting the necessary motions to the feeding-bar O. The lever P is arranged to regulate the forward and backward motions of the feeding-bar. The screw S holds the lever P to place. The pin or fulcrum R works in the slot of the feeding-bar O. The eccentric groove T on the pulley B, working in connection with the pin U, connecting-rod V, joint W, arm X, and joint W', imparts the necessary motions to the needle-bar Y.

*b* is a take-up, so called, for the upper or spool thread, which is attached to the rod *a*. The pin *c*, on its downward motion, is brought in contact with the pin *e*, imparting the necessary motions to the take-up *b*.

The needle-operating cam-groove we make of the same contour on both sides of its center of motion. The eccentric N on the forward end of the same shaft C is also such as to operate the feed-dog O similarly on both sides of a vertical line, and the shuttle-carrier has a central straight vertical slot to receive the pin of the crank which operates it, so that no matter which way the crank is turned the action of the carrier and its shuttle are the same.

Thus, needle, feed, and shuttle do their work equally well, and with the same proper timing relatively to each other although the shaft be reversed to reverse the feed; but there needs no change of mechanism, nor adjustment, nor adjusting devices in order to reverse the feed.

We claim—

In a machine for sewing under either direction of revolution of the main shaft, in combination with the shaft C, cam T, rod V, and needle-actuating lever X, the crank D and the vertically-slotted shuttle-carrier F.

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Witnesses:

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