



# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN SHUTTLE-DRIVING MECHANISMS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **204,291**, dated May 28, 1878; application filed  
February 19, 1877.

### *To all whom it may concern:*

Be it known that we, ERNST BROSEMANN and MARTIN RUSSENBERGER, of the city, county, and State of New York, and MORITZ ROSENSTOCK, of the city of Hoboken, county of Hudson, and State of New Jersey, have invented certain new and useful Improvements in Shuttle-Driving Mechanisms for Sewing-Machines, of which the following, with the accompanying drawing, is a specification.

Similar letters refer to like parts.

Our invention relates to that class of sewing-machines in which two parallel seams are sewed at the same time, our object being to provide a simple and efficient mechanism to form two independent seams at the same time by one operation of the machine. For this purpose we employ the mechanisms and parts hereinafter described.

Two horizontal levers are suitably pivoted to the under side of the platform of the machine. The platform has an extension or auxiliary platform, which forms a bracket for one of the shuttle-levers. Each lever carries a shuttle at one end, and they have an equal and simultaneous movement, one of the levers imparting its motion directly to the other by means of a pitman, the motion of the first lever being obtained from a main shaft, which operates a vertical lever in the post or arm of the machine.

The feed mechanism is in part secured to a bracket of suitable form, which is fastened to the under side of the platform inside of the shuttle-race, instead of outside, as formerly, but projecting over the shuttle-race so as to bring it in proper position for the feed, and to permit the shuttle-levers to move unobstructed to the end of their traverse.

The feed-bar carries a roughened head, formed to suit the double work to be performed, and having a set of feed-points for each seam, the length of stitch being regulated by any customary device.

The devices for holding the goods, controlling the thread, and regulating the tension are the same as ordinarily used.

In the drawing, A<sup>1</sup> and A<sup>2</sup> are the levers, with cranks C C fixed thereto, each lever carrying a shuttle, D D. The levers are suitably

pivoted at L to the under side of the platform Y and auxiliary platform Y'. B is a pitman, connecting the two shuttle-levers A<sup>1</sup> A<sup>2</sup> at M M. C C are cranks, rigidly secured to the levers A<sup>1</sup> A<sup>2</sup> at about right angles, and connected by the pitman B. E is a bracket fixed to the platform of the machine, to which the feed mechanism is in part attached. F is the feed-bar. G is the feed-lever. H is a rod moved by the lever A<sup>1</sup> to raise and lower the feed-bar F. I is a lever, pivoted to the platform, for operating the lever G. K is a stud, which attaches the lever G to the projecting bracket E. N is the lower end of the vertical lever, which receives motion from the main shaft and operates the lever A<sup>1</sup>. P P are needle-slots in the shuttle-race.

Motion being given to the machine, a vertical lever, N, gives a reciprocating motion to the shuttle-levers A<sup>1</sup> A<sup>2</sup>, with their cranks C C. The pitman B conveys motion from A<sup>1</sup> to the lever A<sup>2</sup>. The rod H raises the feed-bar F, when the operation of feeding takes place. I moves the lever G, which, in turn, moves the feed-bar the required distance.

It will be seen that by fixing the crank C of the lever A<sup>2</sup> on the opposite side, the levers will move in an opposite direction.

We have now fully described our invention.

What we claim is—

1. The combination of the two shuttle-levers A<sup>1</sup> A<sup>2</sup>, the cranks C C, and the pitman B, connecting the said levers, and causing them to impart simultaneous movement to the shuttles in circular arcs, as explained.

2. The combination of the extended table or platform Y Y', two levers, A<sup>1</sup> A<sup>2</sup>, crank-arms C C, and connecting-rod B, as and for the purposes set forth.

3. The projecting bracket E and a suitable feed mechanism mounted therein, in combination with the table Y Y', levers A<sup>1</sup> A<sup>2</sup>, crank-arms C C, and connecting-rods B, as and for the purposes set forth.

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Witnesses:

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