2 Sheets—Sheet 1.

E. MOREAU.

Turn-Table for Sewing-Machine.

No. 206,035. **Patented July 16, 1878.**

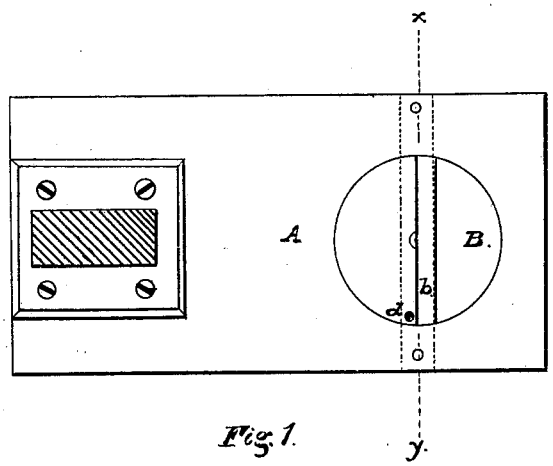

Fig. 1.

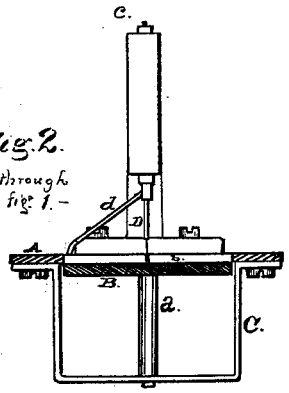

Fig. 2.
Section through
– x.y. fig. 1. –

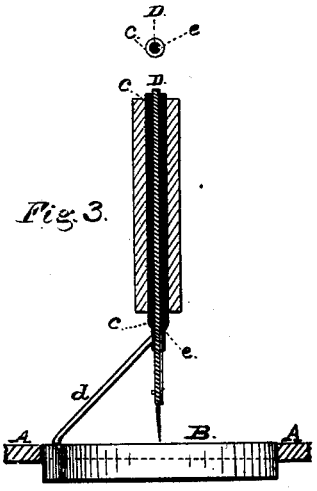

Fig. 3.

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Inventor:
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By C. W. M. Smith his Attys.

2 Sheets—Sheet 2.

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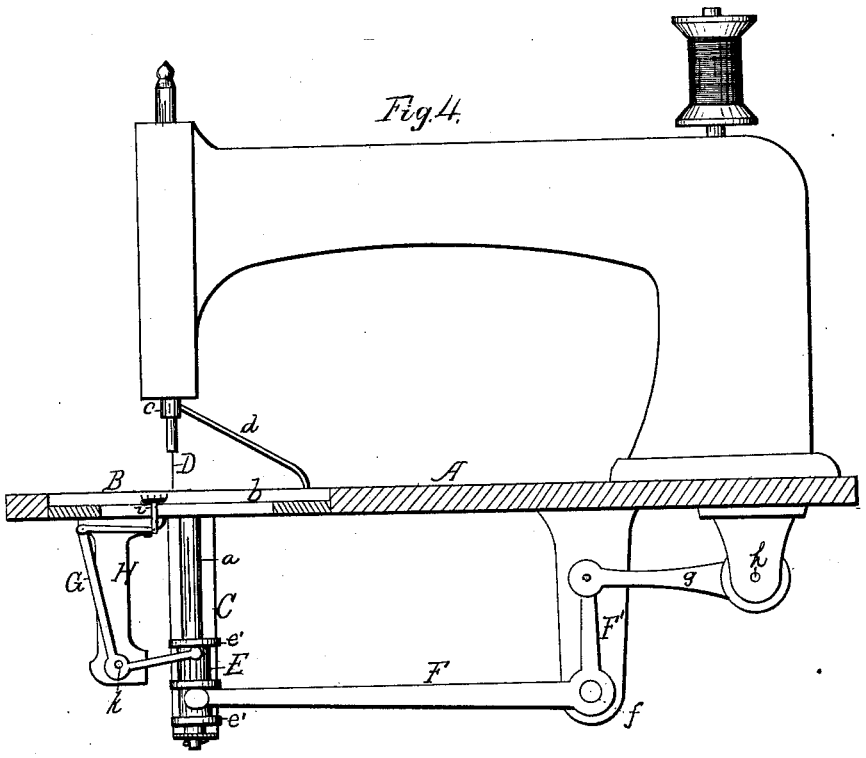
Fig. 4.



WITNESSES

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L. W. Seely

INVENTOR

Eugene Moreau

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

EUGÈNE MOREAU, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO MOREAU MACHINE MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN TURN-TABLES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **206,035**, dated July 16, 1878; application filed October 10, 1877.

To all whom it may concern:

Be it known that I, EUGÈNE MOREAU, of the city and county of San Francisco, in the State of California, have invented a new and useful Improvement in Turn-Tables for Sewing-Machines, which invention is fully set forth in the following specification and accompanying drawings.

In the said drawing, Figure 1 is a top or plan view of the bed-plate of a sewing-machine with my improved shuttle-race turn-table applied thereto. Fig. 2 is a vertical section through the line *x y*, Fig. 1, the supporting-bracket being shown in full lines. Fig. 3 is an enlarged detail view of the needle-bar and bushing. Fig. 4 is a side elevation, with the bed-plate and table in section, showing means for reciprocating the shuttle.

My invention relates more particularly to that class of sewing-machines designed to work button-holes, embroider, &c.; and it has for its object to provide a means for changing the direction of the movement of the shuttle and the line of sewing to any desired angle from its normal position.

It consists in the combination, with the bed-plate in a sewing-machine, of a circular turn-table let into a recess or opening in the bed-plate of corresponding form, and having in it the shuttle-race, in which the shuttle is carried by suitable mechanism operated from beneath the bed-plate, the said turn-table being connected in any proper manner with the needle-bar of the machine to cause them both to turn simultaneously with each other and in the same direction, for the purpose of keeping the loop of needle-thread always in the same position with respect to the shuttle-race, or at right angles with the travel of the shuttle, as will be more fully described and set forth hereinafter.

Referring to the accompanying drawing, A represents the bed-plate, having a circular recess or opening cut into it to receive the circular turn-table B, which is arranged to turn freely within it upon the spindle *a*. The end of this spindle is held in a suitable bearing upon the frame or bracket C, secured to the under side of the bed-plate.

The shuttle-race *b* is cut in the top of the turn-table B, diametrically across it, in proper position with the needle-hole, so that the point of the needle and the shuttle shall work closely together to insure the loop of needle-thread being always caught by the nose of the shuttle. The needle and needle-bar are situated in the center of the turn-table.

The arm of the machine has a bushing, *c*, which holds the needle-bar, and is connected with the turn-table B, and caused to turn therewith by means of the brace *d*, secured to the turn-table at the circumference and to the end of the bushing *c*, and within this bushing the needle-bar D is held and actuated, it being rotated at the same time with the bushing by means of a spline, *e*, on the bushing, which works in a groove cut in the needle-bar. Thus, while the needle-bar is free to reciprocate within the bushing, it is caused to turn with the turn-table B by means of the brace or connection *d*, whereby the position of the bow or loop of needle-thread is always kept at right angles to the line of the shuttle-race as the turn-table is rotated, and the point of the shuttle is always in position to take the loop from the needle.

This construction and application of a turn-table is designed more especially for use in button-hole sewing-machines wherein the work is held and presented to the sewing mechanism by a feeding-clamp, and it enables the stitches to be laid always perpendicularly or at right angles to the edge of the button-hole.

In Fig. 4 is shown the mechanism for moving the shuttle when the turn-table is in any position. Upon the spindle *a* of the turn-table is fitted a sliding collar, E, provided with flanges *e'*. The collar is reciprocated vertically upon the spindle by means of a horizontal lever, F, which works between two of the flanges *e'*, and is fulcrumed at *f* upon a hanger depending from the bed-plate A. The vertical arm F' of this lever is moved, through an arm, *g*, by an eccentric upon the main driving-shaft *h*. Thus the collar can be moved up and down in whatever position the turn-table may be. This movement is converted into a horizontal reciprocation and transmitted to the shuttle-carrier *i* by means of the elbow-lever

G, having its fulcrum at *k* on a bracket or pendant, H, fixed to the under side of the turn-table.

The horizontal arm of the lever G works between two flanges on the collar, while its vertical arm is connected to the shuttle-carrier, so that, as the collar moves up and down upon the spindle, it produces a rocking motion of the lever G and gives a horizontal motion to the shuttle-carrier.

The pendant H, being fixed to the under side of the turn-table, causes the lever G and its connection with the shuttle-carrier to turn with the turn-table around the central spindle, and thus to always maintain the same position with respect to the shuttle-race, while the horizontal arm of the lever G, being always retained between the flanges on the collar, allows the shuttle to be operated at all times, even when the turn-table is being rotated.

Having thus fully described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In combination with a sewing-machine frame or bed-plate, a circular turn-table, B, having a shuttle-race cut therein diametrically across it, and arranged to turn within a recess or opening in the bed-plate, whereby the shuttle-race and its shuttle may be turned at any desired angle across the bed-plate, substantially as herein set forth and described.

2. In a sewing-machine, the turn-table B, having a shuttle-race, in combination with the movable needle-bushing, connected, substantially as described, to the said turn-table, so as to turn therewith, for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 24th day of September, 1877.

EUGÈNE MOREAU. [L. S.]

Witnesses:

C. W. M. SMITH,

EDWARD E. OSBORN.