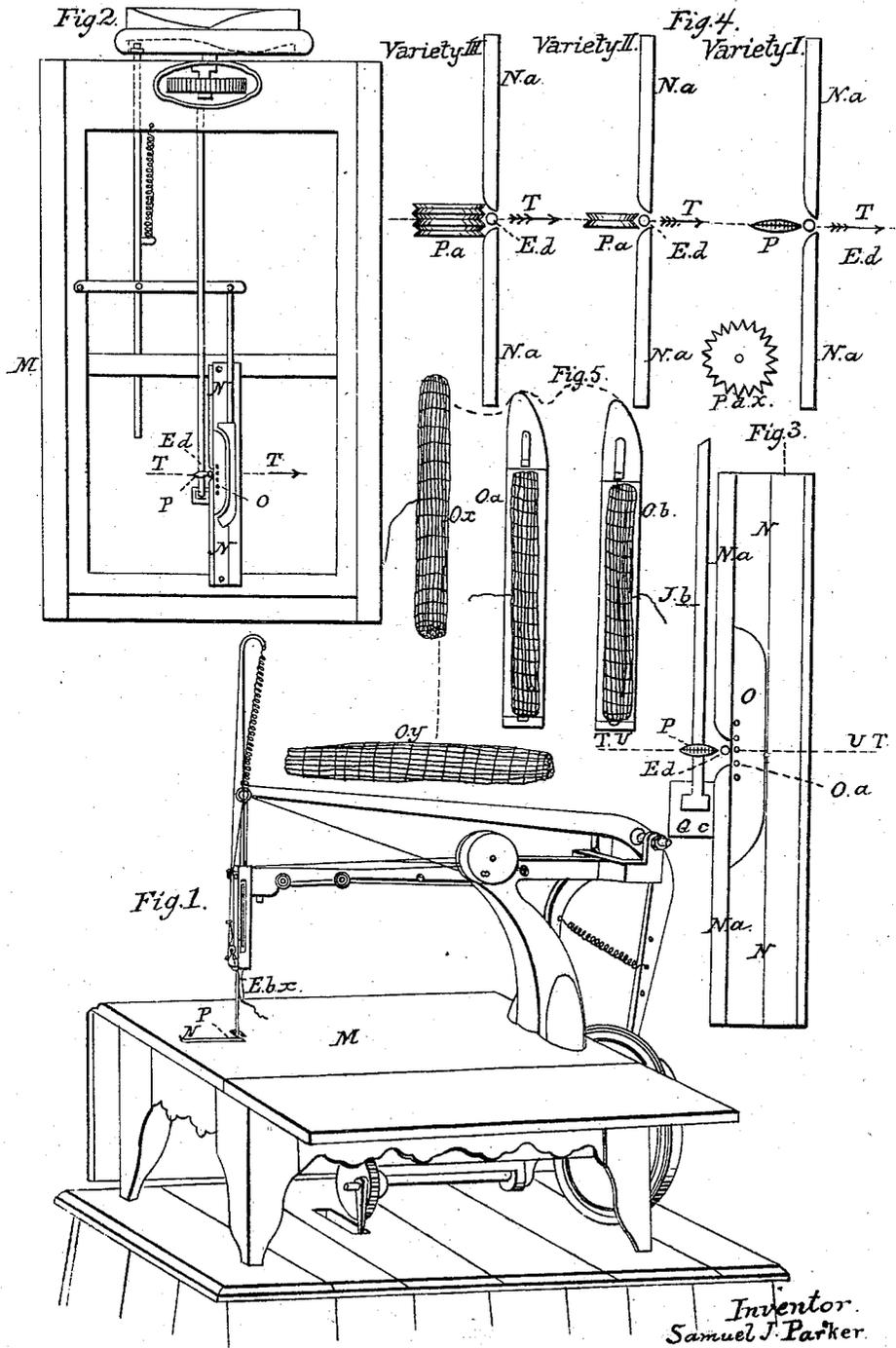


S. J. PARKER.
Sewing Machine.

No. 10,757.

Patented April 11, 1854.



Inventor.
Samuel J. Parker.

UNITED STATES PATENT OFFICE.

SAML. J. PARKER, OF NEW YORK, N. Y.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 10,757, dated April 11, 1854.

To all whom it may concern:

Be it known that I, SAMUEL J. PARKER, of the city, county, and State of New York, have invented certain new and useful Improvements 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, in which—

Figure I is a perspective view of one variety of my sewing-machine. Fig. II is a horizontal transverse section, exhibiting, mainly, only what is desired to be claimed. Fig. III is a view of the relative position of the needle's eye, feed-motion, and shuttle-race in the combination in which I place them.

More particularly, Fig. I represents one form of my sewing-machine. Reference will be had only to the parts to be claimed. M is a table made of wood, marble, iron, or other material, and it is horizontal, and on it the material to be sewed rests. N is the cap covering a portion of the shuttle-race. P is the point where the feed-wheel acts on the material to be sewed, and causes it to move at suitable times and in suitable quantities to, under, and for the needle *E b a*. The feed-wheel is upon a shaft which is moved by a ratchet, which ratchet I shall not describe, as I do not design to claim it in this specification.

In Fig. II, N is the shuttle-race, with the shuttle O lying in it. P is the feed-wheel. T T is a dotted line showing a very important matter—namely, the relative position of the shuttle-race and the shuttle moving in it. The line T T has an arrow upon it to show the direction of the feed motion; or, to render this clear and exact, if possible, N is the shuttle-race, and O is the shuttle in it. Now, to “those skilled in the art” of sewing by machinery, “to which” this “appertains,” using the needle and shuttle, the relative position of the needle's eye is fixed by the position of the shuttle-race. It can be in but one and a definite position to throw a loop with certainty and success. This fact fixes the needle's eye in its relative position onto the shuttle-race. The eye of a straight needle in the instant of passing the center of the material being sewed on a horizontal table must have the line T T pass through it, and a parallel to that line T T is

the only line at right angles to the longitudinal axis of the shuttle at the moment of passing a horizontal plane, which plane passes the longitudinal axis of the shuttle, and said longitudinal axis of the shuttle, meaning a line lengthwise of the shuttle, that can at that instant pass through the needle's eye; or, if this does not define what I mean, then I describe it as follows: First, the eye of the needle (the main point I wish to secure by Letters Patent) is fixed by the position of the shuttle-race, and hence need not be referred to any further; second, T T is the line of the feed-motion, and I place the race N and the shuttle O at right angles to this feed-motion; and this position of the race and its shuttle I refer to only when used with a horizontal table and with a straight needle. To state the same thing again, in other words, I describe the combination of a straight needle at right angles to the shuttle-race, when a line through the eye of the needle is parallel to the line of the feed-motion, the same being also in combination with a horizontal table. Practically, there is no difficulty in this statement, for the practical process of threading a needle, either of a sewing-machine or a hand-needle, is that the needle is in and part of a plane, and the eye of a needle is a hole cut through that plane at right angles to it in every direction; and threading a needle is passing a thread—that is, a line—through that eye at right angles in every direction to said plane, and the attempt never is made to pass the thread by any other line than the right-angled one to said plane. The plane of the needle thus defined is in my machine at right angles to the feed-motion and parallel to the longitudinal axis of the shuttle, and said line through the needle's eye, as thus defined, is parallel to the feed-motion at the instant the eye is passing the line of the feed-motion; and this position of the needle's eye and shuttle and feed-motion is referred to only when the needle is straight and the table is horizontal, as already said. The reason why it is so very difficult to describe my combination is the want of fixedness to the needle. There is no difficulty of a shuttle and its race at right angles to the feed-motion. It means but one thing; but the idea about the needle meets with the difficulty that while a needle has a fixed longitudinal axis, it has no other fixed line. The

nearest approach my mind fixes on is that the eye is a hole—that is, a tube—whose walls are circular or tubular, and the tube is straight; and the axis of this hole or tube is at right angles to the longitudinal axis of the needle, and is fixed in regard to the cylinder, which is the needle. Then assume that, practically, there is never but one line sought in threading a needle, and that line is parallel to the axis of the eye, or one and identical with said axis. The object of this construction of feed-motion, shuttle and its race, and needle-eye is to avoid the bias of the stitch. Were the position opposite to the one described, it is evident that the thread is biased by the thickness of the needle. This bias I seek to avoid as far as possible; hence I place as I do my needle's eye; and the rest of the construction follows as a necessary consequence therefrom.

By Fig. III, I show more fully what has been said. *E d* is the point where the needle plunges; *T T*, the line I have attempted exactly to fix and describe. *T T* is also the line of the feed-motion. *P* is the feed-wheel on the said line *T T*. The arrow indicates the direction of the feed-motion. *O* is the shuttle in its race *N*, the middle or central plane of *P*. The feed-wheel

touches the line *T T*, and, if extended, cuts that line throughout, as seen in Fig. III.

What I claim as my invention, and desire to secure by Letters Patent, is—

That combination that secures to me the relative position in which I place the needle's eye to the movement of the material or feed-motion, and the position of the shuttle and its race resulting therefrom, when the needle is straight and the table on which the material to be sewed is horizontal, said relative position meaning the longitudinal axis of the shuttle and its race at right angles to the feed-motion and the consequent position of the needle's eye therefrom, so that a line drawn through the center of the material sewed, shall coincide with the line of feed-motion, not be at right angles therewith, and this for the purpose of rendering the stitch more nearly straight and perfect than it otherwise would be, the combination and purpose substantially as described.

SAMUEL J. PARKER.

Witnesses:

ASA PARKER,
S. A. CARPENTER.