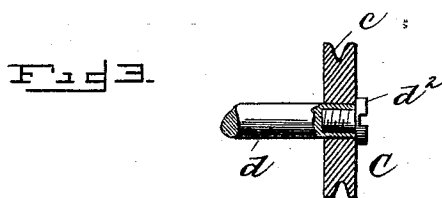
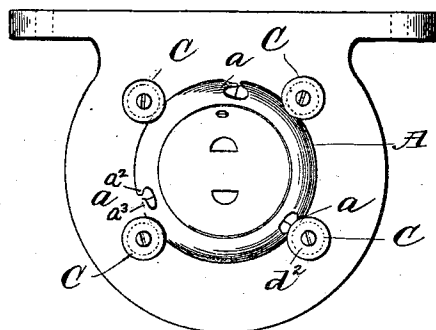
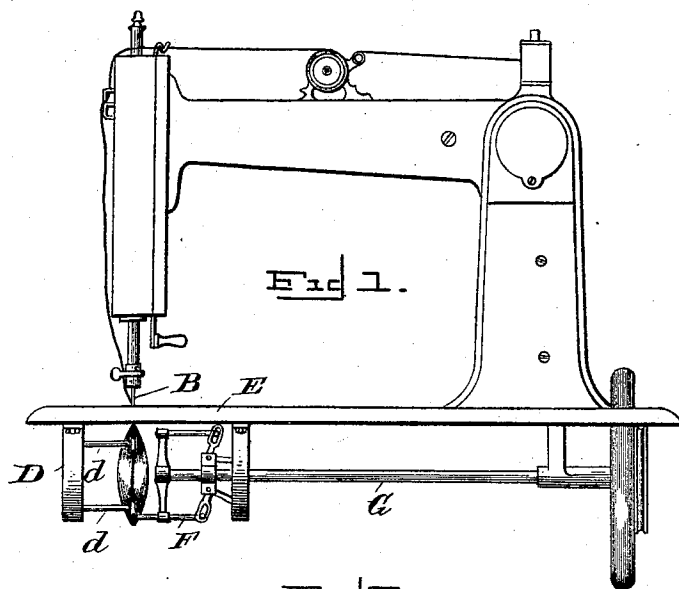


(No Model.)

H. R. TRACY.
SEWING MACHINE.

No. 585,060.

Patented June 22, 1897.



Witnesses

David Smith.

D. Parry

Inventor:

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by

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UNITED STATES PATENT OFFICE.

HARRIET RUTH TRACY, OF NEW BRIGHTON, NEW YORK.

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 585,060, dated June 22, 1897.

Application filed February 8, 1893. Renewed May 29, 1897. Serial No. 638,801. (No model.)

To all whom it may concern:

Be it known that I, HARRIET RUTH TRACY, a citizen of the United States, residing at New Brighton, in the county of Richmond and State of New York, have invented certain new and useful Improvements in Supports for Sewing-Machine Loop-Takers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to sewing-machines.

The object is to produce a revoluble loop-taker or shuttle adapted when rotated in one direction to form one kind of stitch, as a lock-stitch, and when rotated in the opposite direction to form another kind of stitch, as a chain-stitch or a locked chain-stitch; furthermore, to produce a support for loop-takers in machines of this kind which shall be of such construction as to permit the free passage of the loop of the needle-thread around the loop-taker, which will retain the loop-taker securely against vertical or lateral displacement, which will effectually prevent soiling or entanglement of the thread, and which will insure smooth and even running of the loop-taker.

With these objects in view the invention consists in the novel arrangement of parts, as will be hereinafter fully described and claimed.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a sewing-machine embodying my invention. Fig. 2 is a side view of a loop-taker and its support detached from a sewing-machine, and Fig. 3 is a sectional view of one of the wheels or rollers utilized for supporting the loop-taker.

In the drawings, A is a reversely-revoluble shuttle provided with three peripheral openings *a*, the terminals or ends of each of which form at each opening a pair of opposing hooks *a*¹ *a*² of different size and shape, of which the hook *a*² is adapted to engage a loop of the needle-thread and to carry it entirely around the loop-taker to inclose a second or lower thread to form a lock-stitch and the hook *a*¹ to engage a loop of the needle-thread and to carry it through a preceding loop to form a chain-stitch or to engage a lower thread to

form a locked chain-stitch, the change from one kind of stitch to the other being effected by simply reversing the direction of rotation of the loop-taker.

C represents the wheels or rollers by which the loop-taker is sustained. These wheels or rollers are provided in their peripheries with grooves *c* of a size to receive the periphery of the loop-taker without binding.

In the present embodiment of the invention I have illustrated four of these wheels or rollers, though any desired number greater or smaller than this may be employed, according to the work to be done and according to the machine in which they are employed or as most convenient, and these rollers are disposed in such manner with relation to the hooks that at no time in the rotation of the loop-taker will any two of the hook-openings be over or in juxtaposition to two of the rollers, whereby any jar or impact between the hooks and the rollers is obviated and the easy operation and smooth running of the loop-taker insured.

The wheels or rollers are suitably sustained by a support attached to any suitable part of the sewing-machine, and in the form here illustrated they are shown as supported upon a depending plate D, attached to the work-plate E of the machine. Projecting from this plate D are shafts *d*, upon the ends of which the wheels or rollers C are mounted and secured in place by suitable screws *d*² or by other suitable means.

Rotary motion is imparted to the loop-taker in either direction, according to the stitch to be made, and in any suitable way—as, for instance, by pins F, attached to the shaft G of the machine and capable of being introduced into openings in the loop-taker and withdrawn therefrom alternately to give motion to the loop-taker and to permit the passage of a loop of the needle-thread around the same, the relative movements of needle and loop-taker being suitably timed on working in either direction. Ready access is afforded to the loop-taker and its removal rendered easy by the support here described, as by removing one of the wheels or rollers C the loop-taker can be easily removed for the purpose of cleaning the same or for substituting one loop-taker for another.

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

1. A rotary loop-taker having its periphery divided into an arbitrary number of parts by hook-openings adapted to receive a loop of a needle-thread, the said loop-taker being peripherally guided by supports so spaced or disposed with relation to the said openings as to prevent the simultaneous juxtaposition of two or more of the openings with the supports, substantially as described.

2. A rotary loop-taker having its periphery divided into an arbitrary number of equal parts by hook-openings adapted to receive a loop of a needle-thread, the said loop-taker being peripherally supported upon a series of rolls, the supporting-points of said rolls being separated by distances unequal to the distance between any two hook-openings of the loop-taker, whereby two or more of the hook-openings are prevented from simultaneous juxtaposition with the supporting-rolls, and means for operating the said loop-taker, substantially as described.

3. A revoluble loop-taker having a plurality of hook-openings, in combination with rollers for supporting and guiding the loop-taker, the said rollers being so disposed with relation to the hook-openings that at no time in the rotation of the loop-taker will any two of the said openings be over or in juxtaposition with the rollers, substantially as described.

4. A reversibly-revoluble loop-taker having a plurality of oppositely-disposed hooks, in

combination with peripherally-disposed rollers for supporting and guiding the loop-taker, substantially as described.

5. A reversibly-revoluble loop-taker having a plurality of hook-openings, in combination with rollers for supporting and guiding the loop-taker, the said rollers being so disposed with relation to the hook-openings that at no time in the rotation of the loop-taker will any two of the said openings be over or in juxtaposition with rollers, substantially as described.

6. A loop-taker having a plurality of peripheral recesses, the terminals or ends of each recess forming at each opening a pair of opposing hooks of different size and shape, one of the hooks of each pair being adapted, when the loop-taker is rotated in one direction, to engage a loop of the needle-thread and to carry it entirely around the loop-taker to inclose a second thread to form a lock-stitch, and the other hook of the pair being adapted, when the loop-taker is rotated in the opposite direction, to engage a loop of the needle-thread and to carry it through a preceding loop to form a chain-stitch, or to engage a lower thread to form a locked chain-stitch, and peripherally-disposed rollers for supporting and guiding the loop-taker, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HARRIET RUTH TRACY.

Witnesses:

DAVID H. MEAD,
P. H. PARRY.