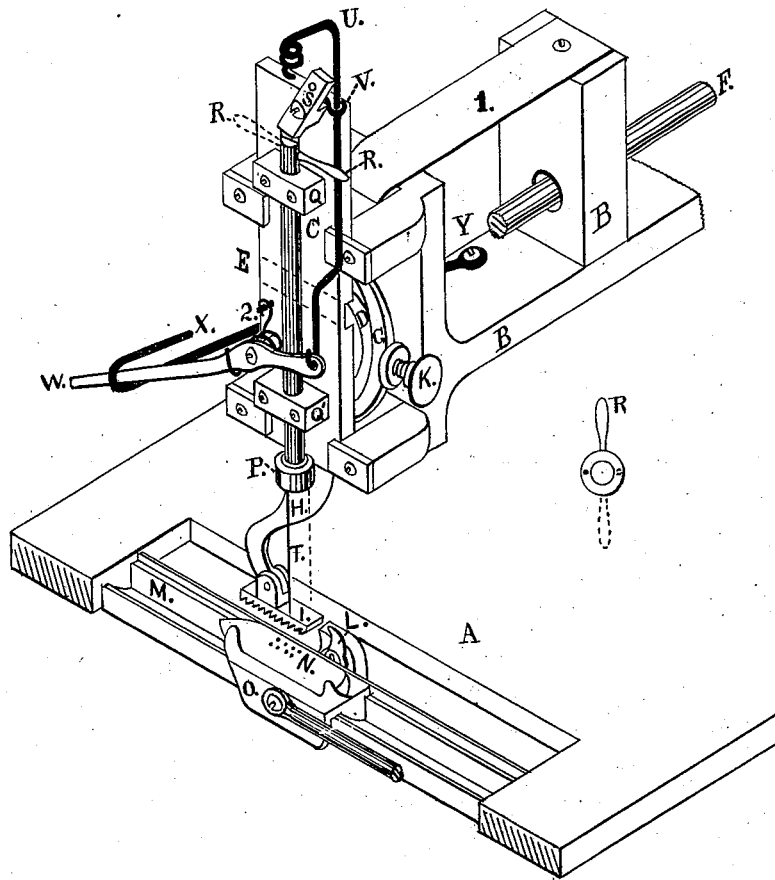


SUSAN B. BROWN.
Sewing-Machine.

No. 167,640.

Patented Sept. 14, 1875.



Witnesses,
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UNITED STATES PATENT OFFICE.

SUSAN B. BROWN, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 167,640, dated September 14, 1875; application filed January 6, 1875.

To all whom it may concern:

Be it known that I, SUSAN B. BROWN, of Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain Improvements in Sewing-Machines, of which the following is a specification:

My invention relates to a device for shifting the needle from the hook which forms the chain-stitch to the shuttle which forms the lock-stitch; and consists in a reversible needle-holder having the needle inserted eccentrically in the end thereof, in combination with a button; and it also relates to a device for obtaining the chain-stitch and the lock-stitch from the same machine; and consists in the combination of the shuttle and its operating mechanism with the hook and its operating mechanism and the reversible needle-holder, having the needle inserted eccentrically in the end thereof.

The accompanying drawing is an oblique view of my invention.

A is the platform. B is the frame which supports the needle-bar and the feed mechanism. C is the slide. A stud projects from the face of the eccentric wheel D into the horizontal slot E in the back of said slide C. Said eccentric D, being made fast to the shaft F, carries, by means of said stud and slot, the slide up and down when said shaft revolves.

The feed-motion, consisting of the slotted plate G, terminating at the lower end in the bent arm H, to which is pivoted the feeder I, toothed or roughened on its under side, and terminating above in a straight arm, is given the necessary vertical and oscillating motions by means of said eccentric D and the spring 1 secured to the frame A at its right end, and let into the upper arm of the plate G at the other end, the amount of said motion being regulated by the screw K in the usual manner. On the right side of the feeder I, below the top of said platform, swings the looping-hook L, commonly used in producing the chain-stitch or tambour-stitch. This hook L performs its ordinary function, and is operated in the usual manner. On the other side of said feeder I is the shuttle-race M, in which slides the shuttle N upon the carriage O, said shuttle being

driven in the usual manner by the mechanism used in lock-stitch machines.

The parts thus far noticed are not new and need no further description.

The shuttle for producing the lock-stitch and the hook for producing the chain-stitch have not, however, been used in the same machine. Both the shuttle and the looping-hook perform their appropriate motions at the same time, but only one kind of stitch is made at a time, as is hereinafter explained.

The needle-holder P is a cylindrical shaft supported in the bearings Q Q' on the outer face of the slide C. Said needle-holder P may be turned half-way around by the bar R, which projects from it at right angles, and it may be held in position by turning the button S, pivoted in the middle, over the flattened upper end of said holder. Said holder moves with the slide C, and carries the needle T in a hole drilled in its lower end, said hole being out of the center of said holder.

When the bar R is turned toward the operator the needle T is outside of the feeder I, and works with the shuttle N to form the lock-stitch, and when said bar is turned away from the operator, the needle works with the looping-hook L to form the chain-stitch. The bar R and the needle T, when in the latter position, are shown by the broken lines. When the position of the needle is changed it must be raised high enough to clear the feeder I, over which it passes.

The take-up U slides in a bearing, V, secured to the top of the slide C, and its lower end is attached to the front end of the lever W. The lever W is pivoted upon a stud projecting from the outer face of the slide C. The other end of said lever W is embraced by a rigid hook or fork, X, which is secured at one end by a screw, Y, to the frame B.

The amount of the take-up motion is determined by the nearness of the hook X to the stud upon which the said lever W is pivoted, the nearer the hook X the greater the take-up motion, and said hook X may be turned upon the screw Y to vary its distance from said stud.

This take-up motion is used when the lock-stitch is made; but when the chain-stitch is

made the hook X is removed from the end of the lever W, and the coiled spring 2 keeps the take-up U in its proper position with reference to the slide C. The thread, of course, runs through the loop at the top of the take-up.

It will be seen that the above-described machine combines the advantages of two separate machines at a cost which little exceeds the cost of one, and that the take-up device is simple, effectual, and easily adjusted.

I claim as my invention—

1. The reversible needle-holder P, having the needle T inserted eccentrically in the end

thereof, in combination with the button S, as and for the purpose described.

2. The combination of the shuttle N and its operating mechanism with the hook L and its operating mechanism, and the reversible needle-holder P, having the needle T inserted eccentrically in the end thereof, as and for the purpose herein described.

SUSAN B. BROWN.

Witnesses:

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