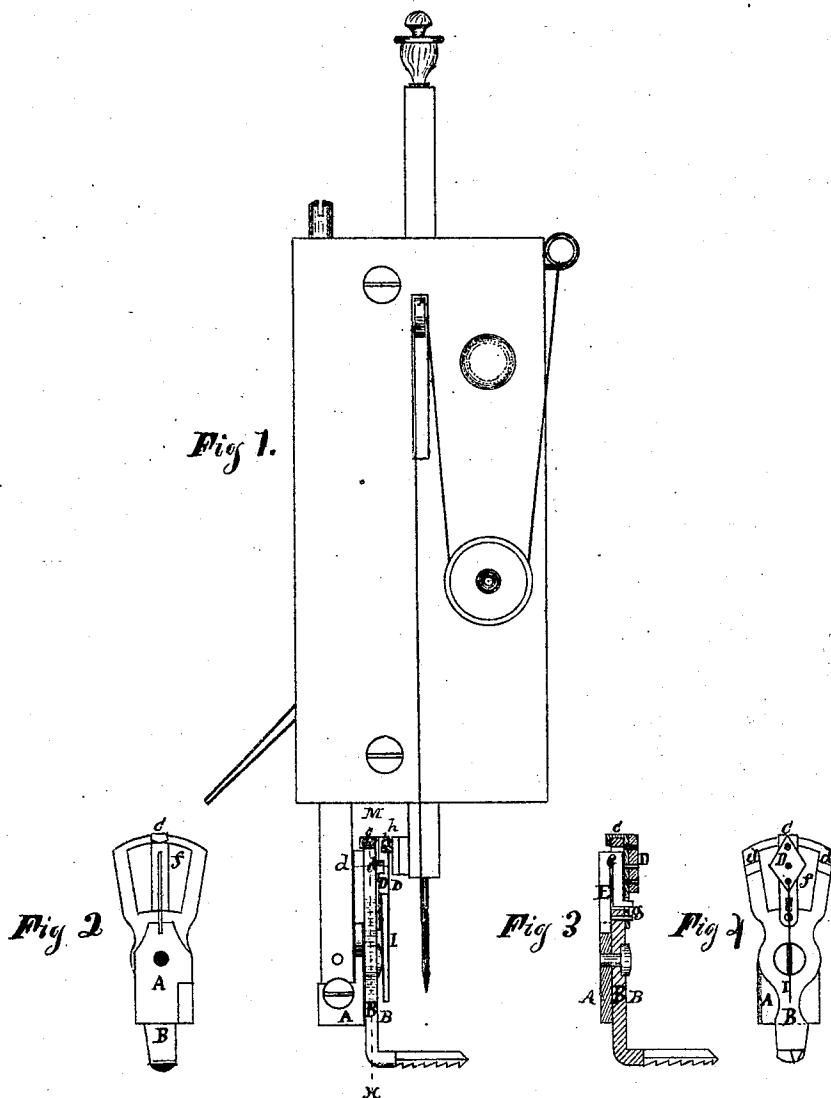


JOHN. N. WILKINS.
BUTTON HOLE ATTACHMENT TO SEWING MACHINES.

No. 121,477.

Patented Dec. 5, 1871.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN N. WILKINS, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 121,477, dated December 5, 1871.

To all whom it may concern:

Be it known that I, JOHN N. WILKINS, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Button-Hole Attachments to Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is an end view of a part of a sewing-machine with my attachment connected thereto. Fig. 2 is a side elevation of my attachment, showing those parts which are at the left hand of line *xx* drawn vertically in Fig. 1. Fig. 3 is a vertical central section of the same, and Fig. 4 is a side elevation, showing those parts which are the right hand of the line *xx*.

Similar letters of reference indicate corresponding parts in the several figures of the drawing.

My invention has for its object to provide a mechanism, which is attached either to the presser-foot or bed, as may be necessary, having regard to the construction of a sewing-machine, for the purpose of stitching button-holes or other over-edge work; and the improvement consists in the employment of an adjustable presser-foot so arranged as to admit of an oscillating movement laterally with the line of the stitch, the same being imparted thereto by the automatic movement of the needle-bar, by which movement the fabric is moved laterally to the ordinary line of stitching at the proper time to form the stitch at and over its edges, the presser-foot coming in contact with and against the upper surface of the feed-motion alternately with the forward movement of the same, whereby the fabric is moved forward in a direct line, thus graduating the stitch.

In the accompanying drawing, A represents a metal plate, one edge of which is bent or formed at a right angle to its side, and is secured to the presser-bar by a set-screw, *a*, passing through a slot cut in its upper edge. Pivoted to said metal plate is the presser-foot B, which is so arranged as to freely oscillate upon its fulcrum. Pivoted to said presser-foot, above its fulcrum, is a lever, C, the upper end of which is bent over and around the upper end of the said presser-foot, and so arranged as to have an independent oscillating

movement. Firmly affixed to the front side of said lever is a cam, D, the sides of which come in contact with and against lugs *d d* affixed to the sides of the presser-foot, by which the movement of said lever is graduated. Attached to and within the upper end of metal plate A is a spring, E, extending upward to or near the upper end of the presser-foot. The said spring is provided at or near its center with a vertical slot, *e*, extending upward nearly to its upper end, the object of which is to disconnect the same at its point of attachment. The shorter portion of said spring is so arranged as to move within a mortise, *f*, cut through the upper end of the presser-foot, and is provided at its lower end with a lip or projection, *g*, which passes horizontally through a mortise in the lower portion of lever C, above its fulcrum, by which the said lever is allowed a slight lateral movement independent of the presser-foot. Attached to the side of the needle-bar is a pivot, *h*, which is so arranged as to come in contact with and against the edges of cam D at each successive automatic movement of the bar, by which an oscillatory movement is imparted to the same. Firmly affixed to the lower point of cam D is a metal spring, I, so arranged as to come in contact with and against pivot *h* as the needle-bar is moved downward, the object of which is to secure the upward movement of the pivot upon the proper side of the cam.

It will be understood that in some classes of sewing-machines the position of the presser-bar is such as to render it difficult to operate my attachment by the movement of the needle-bar when attached to the presser-bar, in which case I provide a separate attachment, which is secured to the bed-plate of the machine in a suitable manner to bring the presser-foot attachment in the required position with the needle-bar.

The operation of my attachment is as follows: The fabric to be stitched is placed upon the machine in the usual manner, allowing the edges of the button-hole or edge of the fabric upon which the stitch is to be formed to come in proper position with the needle; the presser-bar is then adjusted, which brings the foot against the upper surface of the fabric in the ordinary manner. Motion is then imparted to the needle-bar, which brings pivot *h* in contact with and against the edge of cam D, tilting the same laterally against lug *d* of the presser-foot, imparting to said press-

er-foot an oscillating movement, by which the fabric is moved the graduated length of stitch laterally with the feed and edge of the fabric. The stitch being formed, the needle-bar recedes, allowing the pivot to traverse the same side of the cam, which tilts the same to the proper position, allowing the pivot to pass downward upon its opposite side, by which a reverse oscillating movement to the presser-foot is obtained, said presser-foot alternately coming in contact with the upper surface of the feed-bar, thus moving the fabric in a direct line with its edge and at the proper time and distance to form the required stitch.

Having thus described the nature and object

of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The presser-foot B arranged to move the fabric laterally to the line of its edge and alternately forward in the line of stitch by the automatic movement of the needle-bar, substantially as and for the purpose described.

2. In combination with the presser-foot B, the plate A, lever C, cam D, and spring E and I, arranged in connection with pivot *h* of the needle-bar, substantially as described.

JOHN N. WILKINS.

Witnesses:

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