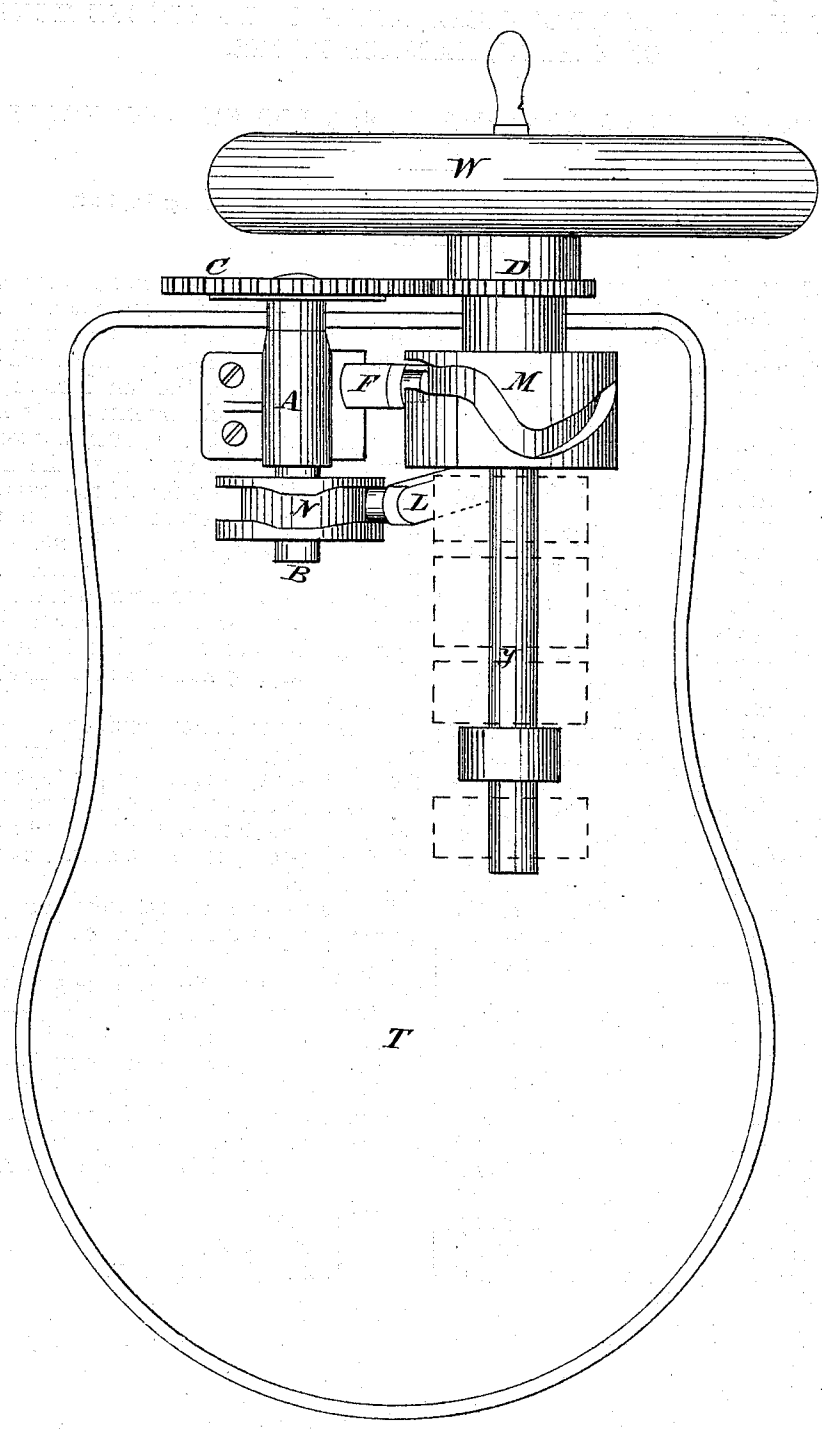
D. W. G. HUMPHREY.

Improvement in Sewing Machine for Button Holes.

No. 125,394. Patented April 9, 1872.



Witnesses

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IMPROVEMENT IN SEWING-MACHINES FOR BUTTON-HOLES.

Specification forming part of Letters Patent No. 125,394, dated April 9, 1872.

I, DANIEL W. G. HUMPHREY, of Chelsea, in the county of Suffolk and Commonwealth of Massachusetts, have invented certain Improvements in Over-Edge Stitching-Machines, of which the following is a specification:

My improvement and invention consist in an over-edge stitching-machine so constructed and arranged as to automatically insert the stitches in the fabric in such a manner that the points of insertion, or punctures made by the needle in the goods, will form two or more parallel lines or an undulating or serrated line of holes at varying distances from the edge of the goods. The object of my invention is to secure a stronger hold of the edge of the goods in stitching and to avoid the liability—which exists when the perforations of the needle in the goods are in a single line parallel to the edge—of severing the edge stitched from the body of the goods. When the perforations are made at varying distances from the edge of the goods, a coarser and stiffer needle may also be used in setting a fine stitch, and yet more strength of material be left between such perforations to resist the tendency to sever the edge from the body of the goods by the repeated punctures of the needle and drawing up of the stitches.

I accomplish said object of my invention in one way by means of my improved button-hole stitching-machine, patented February 6, 1872, (to the drawing and model of which I refer,) and a mechanism attached thereto, shown in the accompanying half-size drawing, which represents a bottom view of said mechanism, and is described as follows: A is a hanger attached to the table T of the machine. Through this hanger runs a shaft, B, having on one end a cam, N, and on its opposite end a gear, C. The gear C is in connection with a smaller gear, D, on the hub of the balance-wheel W. Through this connection motion is imparted to the shaft B and cam N. The cam N on shaft B is a substitute for the cam N on the balance-wheel shaft of such patent, and is so formed as to give, through the lever L, two unequal inward lateral movements to the needle-bar carrier to one revolution of the cam. Consequently, one revolution is given, in this case, to the shaft B to two revolutions of the balance-wheel shaft. Thus, the needle-bar is thrown outwardly a uniform distance over the edge, while inwardly it is thrown alternately long and short, thus inserting the needle in the goods at varying and unequal distances from the edge.

My invention is not confined to simply controlling and varying the lateral movements of the needle-bar, as it is obvious that the object of said invention may be attained by imparting a varying lateral movement to the goods stitched instead of to the needle-bar, as herein described.

I do not claim a mechanism for producing ornamental work upon fabrics by undulating, zig-zag, or devious lines of stitches, where the stitch is wholly within the body of the goods.

What I claim as my invention is—

The combination, with the needle-bar carrier, of the devices shown, or their equivalents, constructed and arranged to automatically change the relative positions of the needle and fabric, to form the edge-stitch described.

DANIEL W. G. HUMPHREY.

Witnesses:
E. F. HALL,
EBEN HUTCHINSON.