2 Sheets—Sheet 1.

W. B. BARTRAM.

Sewing Machine.

No. 54,670.

Patented May 15, 1866.

Fig: 2.

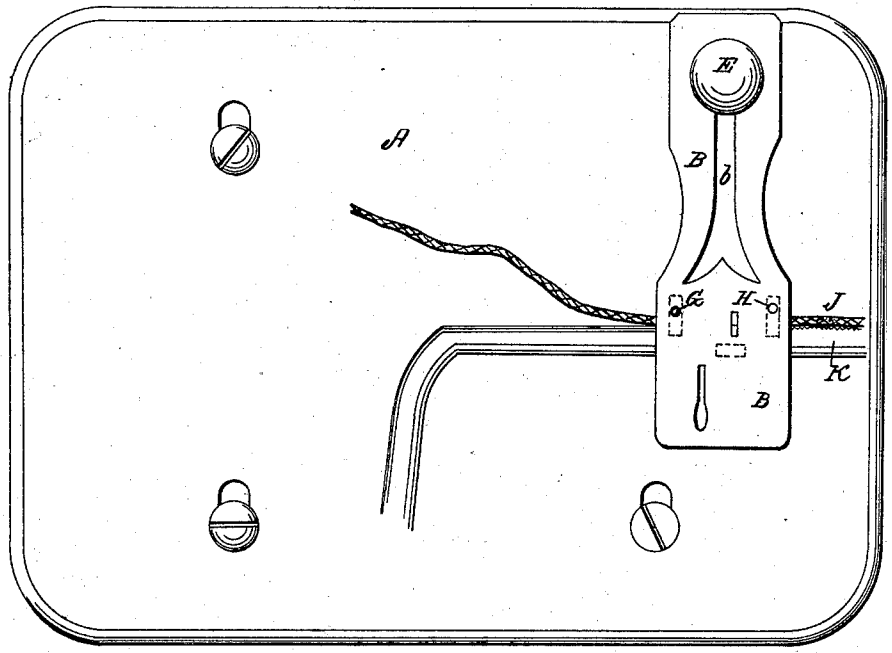

Fig: 3.

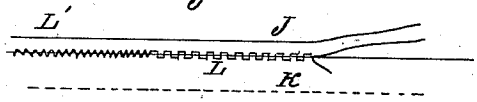

Fig: 4.

Witnesses:

Andrew Whiteley

Charles Hadaway.

Inventor:

W. B. Bartram

By his atty.

R. D. O. Smith

W. B. BARTRAM.

Sewing Machine.

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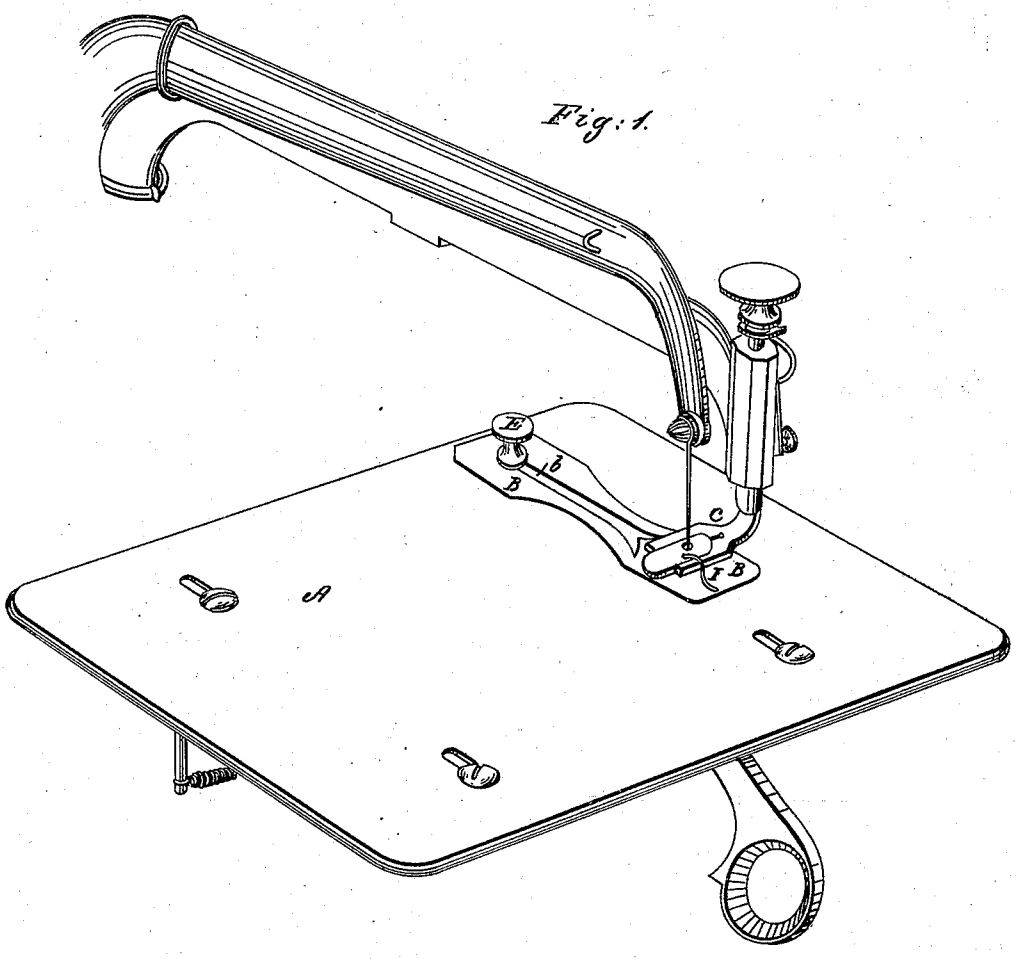
Fig. 1.



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R. D. C. Smith

UNITED STATES PATENT OFFICE.

W. B. BARTRAM, OF NORWALK, CONNECTICUT.

IMPROVEMENT IN SEWING-MACHINES FOR STITCHING CORD TO THE EDGE OF FABRICS.

Specification forming part of Letters Patent No. **54,670**, dated May 15, 1866.

To all whom it may concern:

Be it known that I, W. B. BARTRAM, of Norwalk, in the county of Farfield, in the State of Connecticut, have invented a new and useful Improvement in Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the table of my sewing-machine. Fig. 2 is a plan view of the same. Fig. 3 is a side view of a portion of a garment with a cord attached by my method. Fig. 4 is an enlarged section, showing more clearly the position of the stitches.

In attaching a cord to the edge of a fabric (in making garments or other similar articles) for ornamental purposes, it is advisable that the attaching-thread should pass through the cord and not around it, because it is desirable that the means of attachment should be as nearly as possible invisible, and because the cord so fastened will be more likely to keep in place than if the thread extended around it.

My invention relates to that class of sewing-machines in which a zigzag stitch is produced by a combined lateral reciprocation and forward movement of the material being stitched; and it consists in combining with the automatic mechanism which produces said lateral reciprocation a holding device and guide, by which the material being stitched is made to pass between two surfaces which partake of its lateral reciprocations, so that the action of other parts of the machine shall not disunite the material or fabrics to be joined before they are secured by the stitches.

It will readily be seen that the operation of sewing a loose cord to the edge of a fabric is one of great delicacy, requiring the most accurate adjustment of the mechanism to insure a constant contact of the parts to be united and a uniform and certain stroke of the needle; otherwise stitches will occasionally miss the cord or the edge to which it is to be joined, thus either leaving the cord unfastened at times or imparting to the work an unsightly and irregular appearance. To insure this satisfactory result I have found it necessary to impart to the material to be stitched a lateral reciprocation in addition to its forward movement, and to secure the material against derangement by some means which shall partake of its lateral movements. I therefore pass the material between the smooth surfaces of a clamp or holding device, which, being so operated by the mechanism of the machine, imparts to the material its own lateral reciprocation, and either presses it to the table by the elasticity of the parts or by the pressure of the presser-foot resting upon the upper side of this holding device.

The means which I prefer to use for producing the required zigzag stitch, as shown at L′, Fig. 3, for the purpose herein declared, are those patented to me November 7, 1865, though it is evident that other devices may produce the same result.

That others may understand my invention, I will more particularly describe it.

A is the machine-table, B is the clamp or upper part of the holding device, and C is the presser-foot.

If the ordinary presser-foot (which is secured to the bed-frame of the machine, and therefore has no lateral movement) were permitted to rest directly upon the material to be stitched, it would constantly exert a tendency to draw the cord away from the guide during each alternate reciprocation, because when moved laterally in one direction it would be forced to move by the guide, but no such force would be applied during the return reciprocation, and the pressure of the presser-foot would at all times resist these lateral movements. The clamp or holding device B is therefore inserted between the presser-foot and the material, and as said clamp or holding device receives its lateral or reciprocating movements from the mechanism of the machine the resistance of the presser-foot will not influence it.

The slot *b* permits the clamp or holding device B to be set forward or backward to accommodate cords of different sizes, the lateral stroke of the needle being about the same whether a large or small cord be laid on the edge of the fabric. The length of this lateral stroke is, however, subject to variation and regulation by any of the well-known means for that purpose.

The set-screw E passes through the slot *b* and confines the clamp or holding device B to the table at the desired point. Two pins, G and H, and a shoulder connecting them on the

under side of the clamp or holding device B act as a guide to keep the edge of the fabric and the cord in contact, and in the precise position, respecting the needle's movement, that is required. The pins G and H project downward through orifices in the table, for the purpose of keeping the clamp or holding device B always in proper position in respect to the needle, because a slight movement of this device, either to the one side or the other, would cause the needle to fail to strike through the slot F, and it would inevitably be injured.

The slot F is of sufficient length to allow the needle the necessary latitude to enable it to strike through the cord or through the edge of the fabric.

The hooked wire I is secured to the free end of the clamp or holding device B, and projects over the presser-foot for the purpose of lifting the free end of the said device whenever the presser-foot is raised, so that the fabric may be entirely liberated.

By the above description it will be observed that the plate B, in addition to its function as a holding device, acts also as a guide, in consequence of the presence of the pins G and H and their connecting-shoulder.

As will be observed by reference to Figs. 2, 3, and 4, the stitches connecting the cord J with the edge of the garment K will not in the slightest degree disfigure the ornamental appearance of the cord. The result is therefore satisfactory. The work can be done with the utmost precision by the method described, and with the usual rapidity attained by the sewing-machine.

The alternating stitch shown at L, Fig. 3, may be produced by causing the forward feed to act only at every other stroke of the needle, and by causing the lateral feed to operate also at every other stroke of the needle, and by arranging or timing the mechanism so that the forward and lateral feeds shall act alternately. These effects may be produced by means well known and at command of any skillful mechanic.

Having described my invention and a method of giving effect to the same, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with automatic mechanism capable of producing both a forward movement and a lateral reciprocation of the material to be stitched, a cloth-holding device which partakes of the said lateral reciprocation, and between the upper and lower parts of which the said material and cord pass in their forward movement, for the purpose described.

2. In combination with the laterally-reciprocating table A, the clamp or holding device B, substantially as and for the purpose set forth.

W. B. BARTRAM.

Witnesses:
WM. AHERN,
GEO. H. MEEKER.