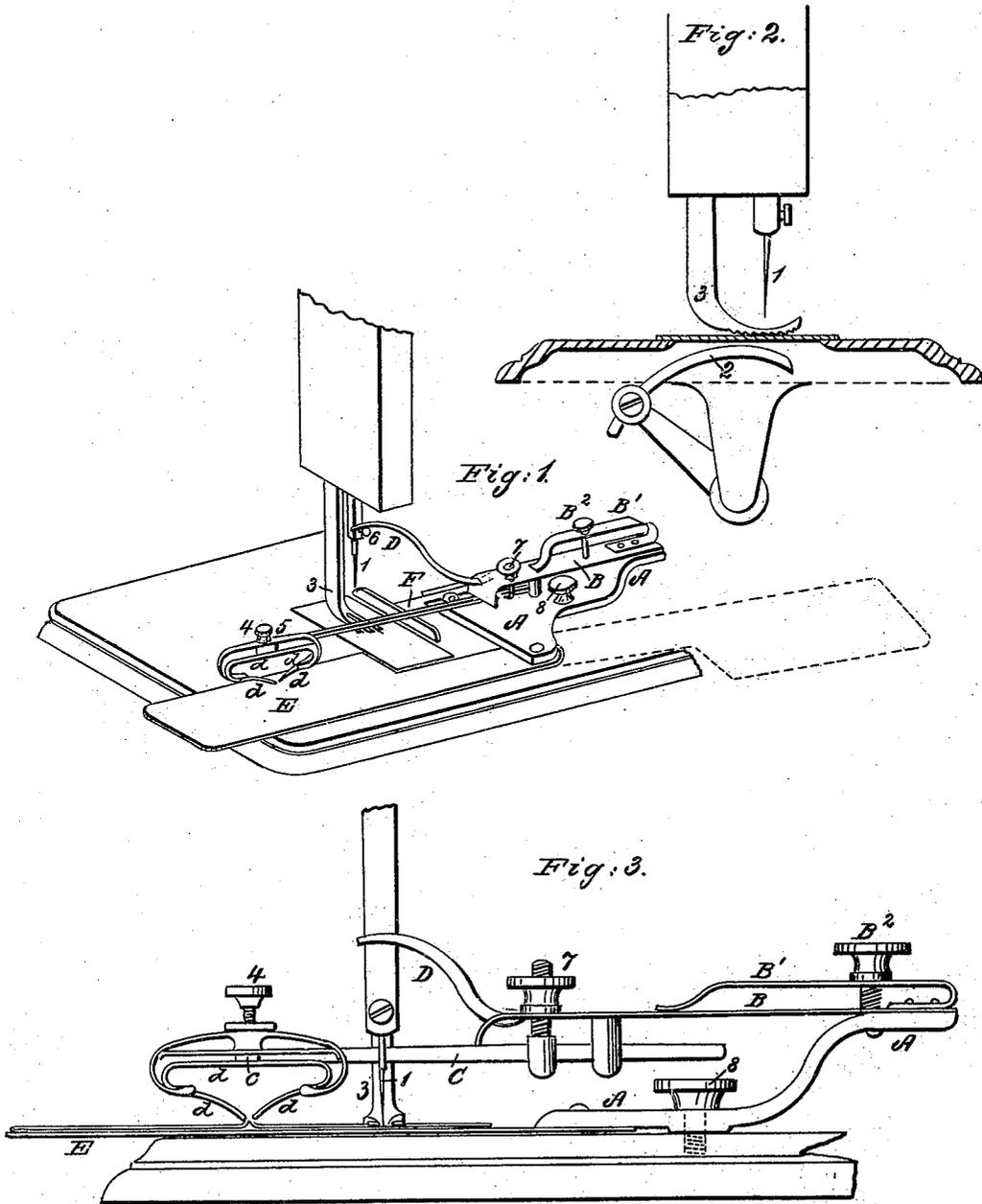


H. W. FULLER.

Sewing Machine Attachment for Marking Tucks.

No. 63,033.

Patented March 19, 1867.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

H. W. FULLER, OF NEW YORK, N. Y.

## IMPROVEMENT IN SEWING-MACHINE ATTACHMENTS FOR MARKING TUCKS.

Specification forming part of Letters Patent No. **63,033**, dated March 19, 1867.

*To all whom it may concern:*

Be it known that I, H. W. FULLER, of the city, county, and State of New York, have invented a new and Improved Apparatus for Marking Fabrics, to facilitate plaiting, tucking, and quilting; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

The first part of my invention consists in the use of what I have termed the "nipping-fingers," substantially as hereinafter described, when arranged in a diagonal position with respect to the surface of the fabric, as herein specified, by which they are caused to nip the fabric by thrusting them against it, while suitably held and supported horizontally; the second consists in the combination, with the apparatus and marking part thereof, of a plate to support the fabric, as herein described, against the thrust of the nipping-fingers; the third, in the combining, with the nipping-fingers, of an adjusting device to spread the fingers, for adapting the apparatus to various fabrics; the fourth, in attaching the nipping-fingers to an arm controlled by a spring, in combination with an auxiliary arm, or the equivalent thereof, to attach to the needle-arm, or some moving part of a sewing-machine, as herein set forth; the fifth consists in the use, in combination, of the nipping-fingers, arranged and acting as herein described, the bed-plate supporting the fabric, and a suitable device, such as ordinarily used on sewing-machines, to feed or move the fabric in the interval between each nipping action of the fingers or nipping device; the sixth consists in the use, in combination, of the nipping-fingers, or equivalent nipping device, the bed-plate, and a feeding device, with a sewing mechanism, to sew the fabric while the same is being creased or marked for a subsequent line of stitching; the seventh, in constructing the arm to which the fingers or nipping device are attached so as to be adjustable for various widths of tucks or plaits; the eighth consists in the use of a supplemental spring and an adjusting device for increasing or diminishing the force of the spring, for the adjustments required for the different widths of tucks or plaits, and various

sorts of fabrics, in combination with the fingers or equivalent nipping device; the ninth consists in combining with the apparatus an adjustable gage, by which to guide the work.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same.

In Figure 1 of the drawing I have shown my improved apparatus as attached to a sewing-machine, in this instance employing the ordinary eye-pointed needle 1, a looper, 2, and a feeding device, consisting of a presser-foot, 3, roughened underneath, and having a back-and-forth motion, being generally known as the "A. B. Wilson rough-surface feed;" but these parts serve chiefly to illustrate the connection of my improved marking apparatus with a sewing-machine, the apparatus being substantially the same whether connected with a sewing-machine or not, and without reference to the special construction of such machine.

A is the frame of the apparatus, to which is fixed a spring, B, and to this is attached an arm, C, carrying at its outer end the nipping or marking device, which, as here shown, is formed of a narrow strip of metal, *d*, the ends of which are pointed or formed with a chisel-edge, as seen in Fig. 3, and set in opposite diagonal positions, as represented, so that a downward motion, forcing them against a plane surface, will draw them together, while the diagonal thrust that is incidental will cause the points or chisel-edges to take hold of the fabric and nip or pinch up its surface, as shown in Fig. 3. A small screw, 4, fixed by a check-nut, 5, adjusts or determines the amount of fabric seized, by enlarging or diminishing the normal space between the ends or points of these nipping-fingers *d*.

I prefer to impart the downward motion to the nipping device by the force of a spring, and this is the object of spring B. The form of this spring is not essential; but to vary its force for adaptation to the peculiarities of various fabrics, I have a supplemental spring, B<sup>1</sup>, and a screw, B<sup>2</sup>. A stiff material requires more force than that which is thin and flexible.

D is an auxiliary arm, fixed to the spring B, and which reaches over the needle-screw 6 of the sewing-machine, so that the arm C and

nipping device are lifted with every upward movement of the needle, the springs B B' bringing it down, as before stated.

The arm C is made adjustable on the spring B, and fastened by the thumb-screw 7. By this means the nipping device may be placed at any distance from the needle, and thus mark for tucks or plaits of any width desired.

The different widths of tucks will sometimes require a variation of the force of the spring B, a wide tuck requiring usually more force of the nipping-fingers than a narrow one, in consequence of doing the work farther from the fulcrum of the arm C. This variation of force is also adjusted by the spring and screw B' B<sup>2</sup>.

When attached to a sewing-machine, the bed or plate thereof is usually a sufficient support for the fabric against the downward pressure of the nipping-fingers; but the apparatus is provided with the plate E to support the fabric, inasmuch as some sewing-machines have not sufficient margin of supporting-surface in front of the needle. Where this is sufficient, however, I prefer to use it, and I therefore have the plate E pivoted to the frame A of the apparatus, so that it may be turned out of the way, as represented by the dotted lines in Fig. 1.

To move the fabric forward in the interval between the action thereon of the nipping-fingers, I employ a suitable feeding device, which may be any ordinary feed used in sewing-machines. That shown in the drawing consists of a pressure-foot, 3, roughened on its under surface, having a back-and-forth motion imparted to it, and generally known as the "A. B. Wilson rough-surface feed." The apparatus is attached to the machine by a thumb-screw, 8. The object of combining said apparatus with a sewing-machine is to enable the operator to save time, as by this combining the two both operations may be carried on at once, and a line of stitching formed in the fabric while the latter is being marked for a subsequent line of sewing.

To facilitate the guiding of the fabric, I provide a gage, F, attached to the frame of the apparatus in any usual manner. For the purposes of such gage a "self-sewer," so called, is well adapted.

In the above invention many of the parts may be modified in mechanical construction

without changing the essential nature of said invention.

When the nipping or marking device is raised, the fingers *d* are open, as seen in Fig. 1, and when forced down against the fabric, the impingement of the fingers *d* against the surface thereof, supported by the plate E, causes the fingers, in consequence of their diagonal position, to close together, pinching up the fabric, as shown in Fig. 3. When the marking device is raised, the fabric is slightly advanced, and the marker again descends, and so on, thus forming a line or ridge on the fabric by a succession of nips or pinches.

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

1. The employment of the nipping-fingers, to form ridges or creases in fabrics, for the purposes specified, when arranged with respect to and operating upon the fabric in substantially the manner described.

2. The combination, with the marking device described, of the plate F, for the purpose specified.

3. The use of the screw 4, or its equivalent, to adjust the fingers to the fabric, as specified, and to determine the amount to be seized.

4. In combination with the marking device, possessing the functions and mode of operation described, the spring B, arm C, and auxiliary arm D, or its equivalent, as specified.

5. In combination, the said marking device, the bed-plate E, or equivalent, and a feeding device, for the purposes specified.

6. In combination, the marking device, bed-plate, feeding device, and a stitch-forming mechanism, substantially as and for the purpose specified.

7. So constructing and combining the arm C and spring B as to be adjustable for various widths of tucks or plaits, in combination with the marking device.

8. The supplemental spring B' and its screw B<sup>2</sup>, or their equivalent, for the purposes specified.

9. In combination with the aforesaid marking device, a suitable gage, F.

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Witnesses:

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