

UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN TUCK-CREASERS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 83,950, dated November 10, 1868; antedated May 11, 1868.

To all whom it may concern:

Be it known that I, H. W. FULLER, of Brooklyn, county of Kings, and State of New York, have invented certain Improvements in Tuck-Creasers for Sewing-Machines; 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 object of this invention is to improve, simplify, and cheapen the construction and operation of tuckers, particularly such as crease the goods by the nipping process.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same, referring to the annexed drawing, wherein the marks of reference correspond in all the figures.

The main frame-support or base of the instrument consists of a long plate, A, or the like, termed a "base-plate," which, when the tucker is attached to a sewing-machine, rests on the cloth-supporting platform or bed of such machine.

In the simplest form of my new tucker I have the base-plate A formed with a spring, *c*, at the rear, and then bring a portion of the same piece forward toward the needle of the sewing-machine to form the lever B, which carries the nipping-points D D', thus forming the main parts of the instrument of one piece. This style is shown in Figure 1.

Fig. 2 is a sectional elevation, and Fig. 3 is a top view, of a modification, in which the base-plate is not carried forward to form the lever, but is stopped off near the rear, and the lever B is formed of wire and permanently fastened to a part of the base-plate, which is turned up to receive it, as represented in Fig. 2.

The said lever, at the point of its attachment to the base-plate, is formed into a horizontal scroll-spring, C', and said spring is properly supported, to insure its efficiency, by a bolster, E. This form of spring has the special advantages of durability, elasticity, and economy of cost. The bolster E may be formed of one piece with the base-plate.

To the front end of the base-plate I attach a plate, F, called a "tongue-plate," the same having a projection or tongue, F'. The nipping-points play down on this tongue, the

fabric being acted on while passing over and lying upon it, and the tuck previously formed and folded passing under it.

To permit the tuck to run under the tongue F', a part of the tongue-plate is bent down, as at *f*², so as to rest on the bed of the sewing-machine, or may be supported by a leather buffer, and thus hold the tongue F' away from such bed a sufficient distance. This tongue should be tempered and hardened.

G is a gage for guiding the work. I is a cloth-smoother, to produce more or less friction on the fabric as it is drawn forward by the feeding mechanism of the sewing-machine.

To expedite the measurement of the width of tucks to be made, I have a scale of divisions marked on the base-plate or the smoother I, or both, as seen in Fig. 3, and for nicer or more accurate gradations the tongue-plate F is pivoted to the base-plate A by a pivot, 2, or otherwise, so attached as to be adjustable toward and from the gage G, and by these means—viz., the graduated scale and the adjustable tongue-plate—any measurement or division may be arrived at to the smallest fraction.

The base-plate A and gage G are attached to a fixture termed a "clamping-block," so as to slide freely upon the same. The object of said block H is to attach the whole instrument to a sewing-machine, which is done by passing the gage-screw of such machine through said block at the opening 1. When so attached the base-plate and the gage G are still adjustable to and from the needle of the sewing-machine, and are held in place at the location desired by separate thumb-screws 4 5, or, in some cases, by the clamping action of the gage-screw aforesaid. I also use the block H as a gage in some instances by substituting a slot for the perforation 1 therein.

When used for tucks of different widths the adjustment of the instrument in different relations to the needle-bar of the sewing-machine will naturally vary the force with which the instrument acts on the fabric. To modify and equalize this, and also to prevent straining of the sewing-machine by the resistance of the tucker when brought down to its limit of motion, I combine with the lever B of the tucker a compensating-arm, J, to receive the

force of the needle-bar of the sewing-machine in operating the instrument, such compensating-arm being made so as to yield when required, and thus give to the motion of the needle-bar, when such motion shall chance to be of greater range than requisite, to actuate the lever B of the instrument or tucker.

With the object of further compensation, the arm J is curved upward, in order that a greater capacity to yield shall accompany an increased range of motion in the lever B of the tucker consequent on that adjustment of the tucker in which the needle-bar of the sewing-machine operates the tucker by contact near the outer end of said arm J or lever B, as in doing wide tucks.

An alternative is seen in Fig. 4, wherein the arm J is slotted for the needle of the sewing-machine to pass through, by which the needle is made to steady the lever, preventing side motion thereof, and otherwise insuring certainty of action.

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

1. The lever which carries the nipping-points, the spring, and the base-plate, all

formed of or from the same piece of metal, substantially as described.

2. The adjustable tongue-plate and tongue, combined with its supporting-plate, as specified.

3. The combination, with the base-plate and supporting-bolster, of the scroll-spring, constructed as described, and for the purpose set forth.

4. The combination, with the adjustable tongue-plate and tongue, of the graduated scale, whether on the cloth-smoother or the base-plate.

5. The combination, with the adjustable tongue-plate and tongue and the graduated scale, of the nipping-points D D'.

6. The gage G, in combination with the clamping-block and the tucker proper, constructed substantially as described, and all separately adjustable with respect to the needle of the sewing-machine, and for the purposes set forth.

H. W. FULLER.

Witnesses:

H. B. BROWN,
E. H. SMITH.