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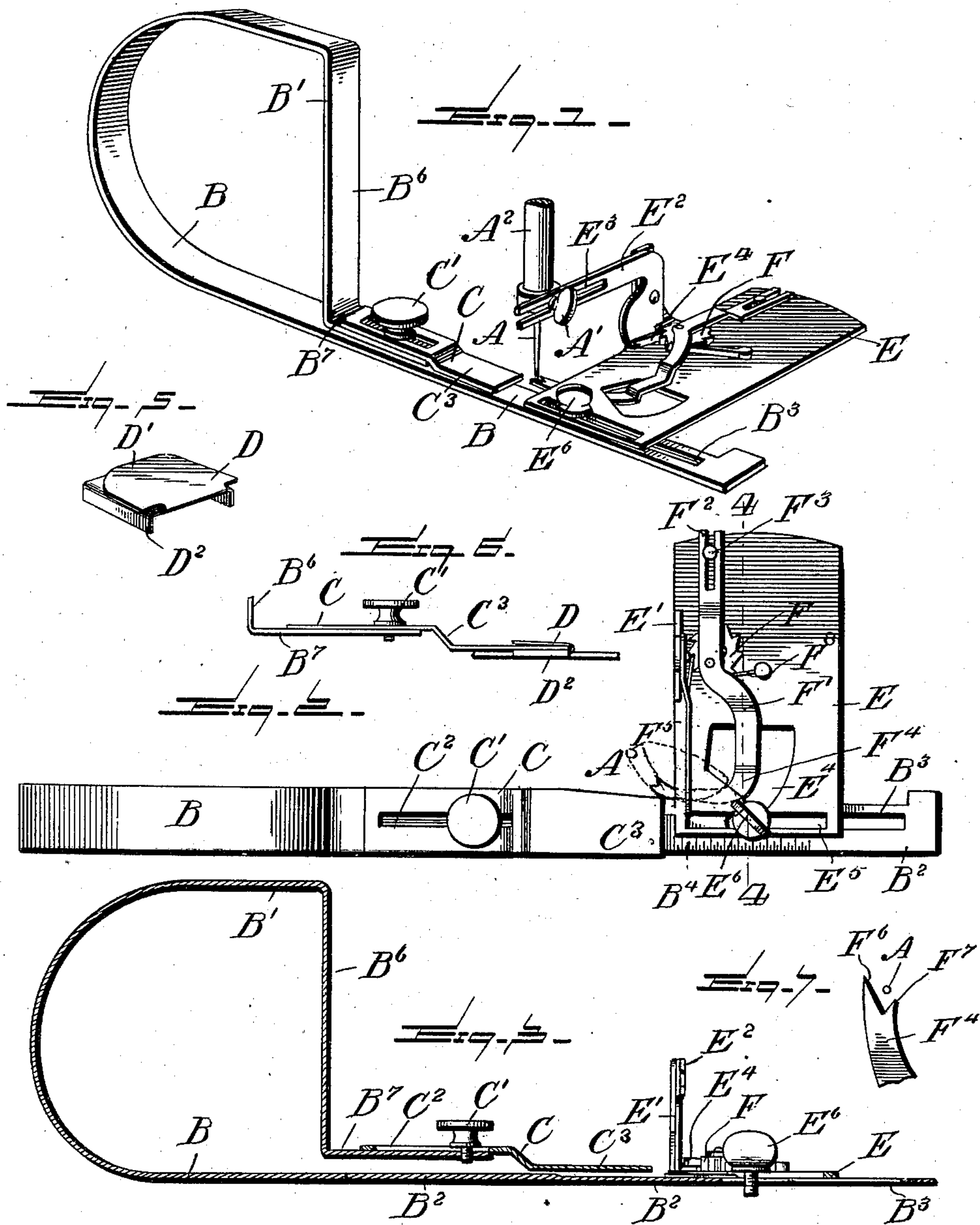
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G. ROBINSON.

TUCKING AND SCALLOPING ATTACHMENT FOR SEWING MACHINES.

(Application filed June 6, 1901.)

(No Model.)



WITNESSES:

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TUCKING AND SCALLOPING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 686,131, dated November 5, 1901.

Application filed June 6, 1901. Serial No. 63,376. (No model.)

To all whom it may concern:

Be it known that I, GEORGIANA ROBINSON, a citizen of the United States, residing at New York, in the county of New York, State of New York, have invented certain new and useful Improvements in Tucking and Scalloping Attachments for Sewing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a tucking and scalloping attachment for sewing-machines, and particularly to a device wherein the tucker is adapted to form either plain or scalloped work.

The invention has for an object to form an improved tucking attachment adapted to form tucks from the body of a piece of material and employing a thin spring-arm supported by a rigid frame and adjustable relatively to a fixed scale for determining the depth of tuck, whereby very fine pin-tucks can be produced in the body of the material.

A further object of the invention is to provide a scalloping means coöperating with said tucker for producing a scalloped tuck in the body of the material by the successive looping or pressing inward to the needle of the free edge of the tuck, so as to form a scallop against a straight stitched edge at its base, thereby securing a draped or looped effect.

A further object of the invention is to provide a particular construction of scalloper-blade to be operated by the needle-bar of the sewing-machine, so as to effect a movement of said blade in an elliptical path, one end of which lies beneath the needle for forming the straight edge or stitching in the scallops.

Other objects and advantages of the invention will hereinafter appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective of the invention. Fig. 2 is a plan thereof. Fig. 3 is a longitudinal section. Fig. 4 is a cross-section on the line 4 4 of Fig. 2. Fig. 5 is a detail perspective of the controller for application to the tucker-blade. Fig. 6 is a side elevation of this adjustable spring tucker-blade, and Fig. 7 is a detail of the toothed crotch for the scalloper-blade.

Like letters indicate like parts throughout the several figures of the drawings.

In the application of the invention it will be understood that the attachment is capable of use with any character of sewing-machine and is disposed with one edge of the tucker-blade immediately adjacent to the machine-needle, as indicated at A, while beneath said needle any usual or ordinary form of feeding mechanism is employed.

Referring first to the tucker-blade, the letter B indicates a rigid frame formed of cast or other suitable material and having the looped portion B' adapted to receive the body or bulk of the fabric upon which the tucks are to be formed. The base B² of this frame is extended and provided with a slot B³, while upon its upper face are the usual series of indications or measurements B⁴, by which the blade may be adjusted for tucks of different diameters. From the loop B' a downwardly-extending hanger B⁵ carries at its lower end a horizontal portion B⁷, parallel with the base B², but slightly separated therefrom to permit the passage of material between the base and the arm B⁷, to which the adjustable spring tucker-blade C is secured by any desired means—for instance, a screw C', passing through a slot C², formed in one end of the blade C—while the opposite end of said blade is slightly depressed, as at C³, and lies directly over the base B², with one edge thereof adjacent to and in line with the needle A, as before described. This spring-blade is formed of thin material, so as to offer the least possible resistance to the passage of the goods over and under the same as it is fed to the needle and to permit the finest possible adjustment for the purposes of forming tucks of very small depth—such, for instance, as are known as “pin-tucks.” In connection with this tucker-blade a controller D is particularly adapted for use and principally comprises a clip adapted to pass over the blade after the goods have been adjusted thereon to form the desired depth of tuck, so as to permit the passage of goods under just sufficient tension to insure the proper feed, and for that reason the controller is made of spring material having the overlapped plate D' to pass above the blade C³, while from the base of the con-

troller the depending flanges D^2 engage opposite sides of the base B^2 , thereby holding the device against lateral movement. It will be seen that if this controller be slipped in place over the blade of the presser-foot it will hold the goods thereon and control the feed and adjustment of the material over the blade.

For the purpose of forming the scallops in the tuck as it is formed by the needle I have provided an improved form of scalloper, which is mounted upon any desired form of base-plate E and has at one side thereof, adjacent to the needle A , a standard E' , upon which is pivoted a lever-arm E^2 , having a forked end E^3 , adapted to be oscillated by any desired means—for instance, a projection A' from the needle-bar A^2 —while the opposite end or crank-arm of this lever is provided with a spring-spur E^4 , adapted in the oscillations of the lever to engage the teeth of a ratchet-wheel F and rotate the same by an intermittent step-by-step movement imparted at each reciprocation of the needle-bar. This ratchet-wheel is pivotally mounted upon the base E and has pivoted to its upper face a swinging tucker or arm F' , which being pivoted upon the ratchet eccentrically to the axis thereof is adapted to travel in an elliptical path, as hereinafter described. The tail of this blade or arm F' is formed with a forked portion F^2 , adapted to ride over a stud or pin F^3 , secured to the base E , which guides the movement of the blade, while the opposite end of said blade is bent downwardly, as at F^4 , and passed through an opening E^4 in the base E , so as to lie in practically the plane of the base B^2 of the tucker and to travel immediately adjacent to the point of the needle. At the free end of the tucker-blade F' teeth F^5 are formed, comprising a crotch having one tooth formed with an inclined face F^7 to admit the point of the needle to place the cloth under the same in forming the scallop, while the other face F^6 is longer and inclined to clear the needle in the backward swing of the arm. The specific construction of this crotched end of the scalloper-blade F' is shown in Fig. 7. The base-plate E is provided with a slot E^5 , at one edge thereof, by which it is secured and adjusted upon the base B^2 of the tucker by any desired means—for instance, the thumb-nut E^6 , as shown, which passes through both the slot of the scalloper-base and the tucker-base. The retaining-spring pawl F^8 engages the ratchet-wheel E and holds the same against backward movement.

In the operation of the invention it will be seen that the continued reciprocation of the needle in stitching the straight tucking causes a step-by-step feed of the scalloper-blade, which is thereby caused to intermittently contact with or pass beneath the needle and carry the goods inward to the straight line of stitching and form a draped or looped effect of the tuck, which is particularly desirable

and ornamental in dress fabrics. It has heretofore been customary to form scallops in a plain or tucked fabric by bodily moving the same laterally beneath the machine-needle and afterward securing the scalloped fabric to the garment. The present improvement is particularly adapted for forming either a plain or scalloped tuck in the body of a piece of fabric through a single passage of the same through the machine. It will be seen that this improvement embodies a very simple construction of parts adapted to cooperate with each other and to be readily adjustable to any form of machine, whereby when the scalloper is removed the ordinary plain tucking may be performed by the blade C^2 , or by connecting the scalloper in conjunction with said blade a very desirable and ornamental scalloped tucking may be formed. It will be also obvious from the foregoing description that at each descent of the needle-bar the ratchet-wheel F is fed one tooth and that by a proper arrangement and proportion of this wheel and adjacent parts the scallops may be made of various lengths and the invention adapted to produce other and different ornamental scallops relative to the straight line of stitching forming the base of the tucking to which they are applied. This device produces a tucker which folds, holds, and stitches the tuck without a marker and without the necessity of removing the work from the machine to fold down the next successive tuck, while the construction of the scalloper is such as to permit its immediate application at any time to scallop any desired tuck—for instance, an alternating one—in order to produce the ornamental effect of a plain and a scalloped tuck alternating with each other in the finished fabric or garment.

It is obvious that changes may be made in the details of construction of the several parts without departing from the spirit of the invention as defined by the appended claims, while the parts may be adapted for application to different characters of machines and work by the exercise of ordinary mechanical skill.

Having described my invention, what I claim is—

1. In a device of the class described, the combination with a tucker-blade and needle, of a scalloping-blade, means for actuating said scalloping-blade whereby the tuck-engaging end of said scalloping-blade is adapted to travel to and from said needle in a continuous looped path; substantially as specified.

2. In a device of the class described, the combination with a tucker-blade and needle, of a scalloping-blade the tuck-engaging end of which is adapted to travel to and from said needle in a continuous looped path, and means for imparting an intermittent movement to said scalloping-blade; substantially as specified.

3. In a device of the class described, the combination with a tucker-blade and needle,

of a scalloping-blade the tuck-engaging end of which is adapted to travel to and from said needle in a continuous looped path, a pivoted ratchet-wheel having said scalloping-blade eccentrically mounted thereon, and a lever-arm driven by said needle for rotating said wheel; substantially as specified.

4. In a machine of the class described, the combination with a tucker-blade and needle, of a scalloping-blade the tuck-engaging end of which is adapted to travel to and from said needle in a continuous looped path, a pivoted ratchet-wheel having said scalloping-blade eccentrically mounted thereon, a lever-arm driven by said needle for rotating said wheel, a spur-spring carried by said lever for engaging said ratchet, and means independent of said wheel for engaging and for controlling the movement of the tail of said scalloping-arm; substantially as specified.

5. In a machine of the class described, the combination with a tucker-blade and needle, of a scalloping-blade the tuck-engaging end of which is adapted to travel to and from said needle in a curved path, a pivoted ratchet-wheel having said scalloping-blade eccentrically mounted thereon, a lever-arm driven by said needle for rotating said wheel, a spur-spring carried by said lever for engaging said ratchet, a slotted tail upon said scalloping-arm, a fixed pin or post passed through said slot, and means for adjustably supporting said scalloping mechanism relative to said tucker-blade; substantially as specified.

6. In a device of the class described, the combination with a tucker-blade and needle cooperating therewith, of a scalloping arm or blade, means for actuating said scalloping-blade whereby the tuck-engaging end thereof is caused to travel in a path toward said needle at one side thereof and to recede therefrom in a path at the opposite side of said needle whereby a draped or looped tuck is produced; substantially as specified.

7. A scalloping mechanism adapted to cooperate with a tucker-blade and needle and comprising a base-plate, a rotating wheel thereon, a scalloper-blade pivoted eccentrically upon said wheel and provided with a tuck-engaging end adapted to travel in a curved path, means for retaining the tail of said blade against oscillation, and means for rotating said wheel; substantially as specified.

8. A scalloping mechanism adapted to cooperate with a tucker-blade and needle and comprising a base-plate, a rotatable wheel thereon, a scalloper-blade pivoted eccentric-

ally upon said wheel and provided with a tuck-engaging end adapted to travel in a curved path, means for retaining the tail of said blade against oscillation, a standard from said base-plate, a lever-arm pivotally mounted upon said standard and provided at its lower end with means for engaging and rotating said wheel in one direction; substantially as specified.

9. A scalloping mechanism adapted to cooperate with a tucker-blade and needle and comprising a base-plate, a rotatable wheel thereon, a scalloper-blade pivoted eccentrically upon said wheel and provided with a tuck-engaging end adapted to travel in a curved path, means for retaining the tail of said blade against oscillation, a standard from said base-plate, a lever-arm pivotally mounted upon said standard and provided at its lower end with means for engaging and rotating said wheel in one direction, a toothed operating-face upon the free end of said scalloping-blade having one wall of greater length than the other; substantially as specified.

10. A scalloping-blade adapted to cooperate with a tucker-blade and needle and having a toothed operating end with one wall of greater length than the other to form a crotch, and means for producing an elliptical movement in a continuous looped path of the toothed end of said blade toward and from a stitching-needle; substantially as specified.

11. In a device of the class described, the combination with a tucker-blade and needle, of a base-plate having an opening therein and a standard at one side thereof, a ratchet-wheel pivotally mounted upon said plate, a scalloping-blade pivoted eccentrically upon said ratchet-wheel, a slotted tail upon said scalloping-blade, a fixed pin passed through said slot, a depressed free end to said scalloping-blade passing through the opening in said plate, a crank-arm pivotally mounted upon said standard, a spur-spring carried by the lower end of said arm and adapted to engage said ratchet-wheel, and means for preventing a backward movement of said ratchet, whereby the scalloping-blade is caused to travel in a substantially elliptical path to and from said needle; substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGIANA ROBINSON.

Witnesses:

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ALEX CRISTADORO.