

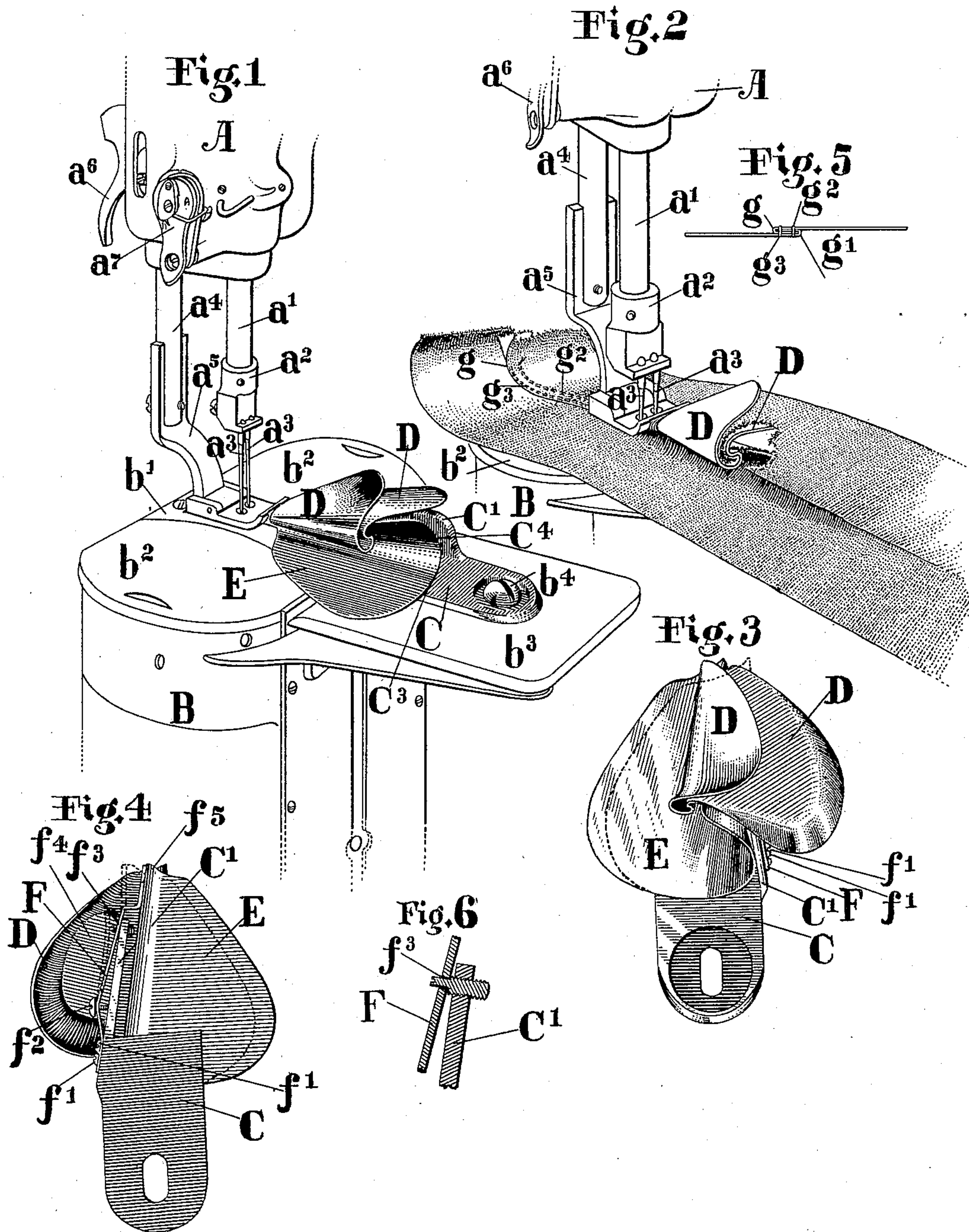
No. 614,313.

Patented Nov. 15, 1898.

S. H. WHEELER.
SEWING MACHINE FOLDER ATTACHMENT.

(Application filed Feb. 4, 1898.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

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SEWING-MACHINE FOLDER ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 614,313, dated November 15, 1898.

Application filed February 4, 1898. Serial No. 669,130. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL H. WHEELER, a citizen of the United States, and a resident of Fairfield, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Folders Used in Connection with Sewing-Machines, of which the following is a specification.

My invention relates to improvements in lap-seam folders for sewing-machines.

The main object of my invention is to improve the folding devices used in connection with sewing-machines employing two needles, and to show the application of my invention I have chosen to illustrate and describe it in connection with so much of that form of the well-known Wheeler & Wilson sewing-machine commercially known as the "post-machine" as is necessary to show an operative combination.

I have mounted the two scrolls for folding the edges of the material for the action of the sewing mechanism in such manner that a uniform gage of fold and stitching is maintained on the right or exposed side of the garment or material no matter what may be the variations in thickness of the material operated upon. To accomplish this new result, I have invented a novel construction and mode of operation of the yielding elements necessary to the folding of uneven thicknesses. A form of construction producing this new mode of operation and result is illustrated in the accompanying drawings, in which—

Figure 1 is a view in perspective, showing the folder attached to the machine in position to receive the material. Fig. 2 is a like view including the material, a portion of the latter illustrated as torn out to better show the operation of the folder. Fig. 3 is a plan view of the folder, showing in dotted lines the action of the movable scroll. Fig. 4 is an under side view showing the adjusting-spring secured at its one end to the base-plate, its opposite end carrying the movable scroll, the latter shown in dotted lines in the position shown in dotted lines in Fig. 3. Fig. 5 is a view in section of a finished seam. Fig. 6 is a detail.

Referring to Figs. 1 and 2, A is a portion of the overhanging arm, a the needle-bar, a^2 needle-clamp, a^3 a^3 needles, a^4 presser-bar, a^5 presser-bar foot, a^6 presser-lifter, a^7 thread-controller, B a portion of the upright post attached to the bed of the machine, b' throat-plate, b^2 b^2 slide-plates, b^3 cloth-plate suitably attached to the upright post B, b^4 a screw commonly used for attaching folders, hemmers, and like attachments to the cloth-plate b^3 , all of which are common to the well-known Wheeler & Wilson post-machine and are not of my invention.

The folder comprises the base-plate C, formed with the extension C', the stationary scroll D, the movable scroll E, the spring F, spring-screws f' f' , spring adjusting-screws f^2 f^3 , and solder-block f^4 , the latter being employed to rigidly secure the stationary scroll D to the plate extension C' of the base-plate C. The peculiar form given to the scrolls D and E to fold the edges of the material so as to present a triple thickness of the material to the needles is too well understood to need further explanation. It is well known in the art of folder constructions that the form or design may vary according to the production desired.

Referring to Figs. 2 and 5, it is the scroll D that lays the fold g , which in these figures is supposed to represent the exposed or right side fold. The scroll E, secured to the spring F, as at f^5 , lays the fold g' . Owing to the automatic action given the scroll E by the material and spring F, the fold g' may vary in its distance from the line of stitching g^2 , dependent upon the variations in the thickness of the materials operated upon, while the line of stitching g^3 and the fold g , owing to the rigid mounting of the scroll D, will always maintain a uniform gage or distance apart. This gives to the production the desired uniform finish on the right side by throwing all the unavoidable lack of uniformity onto the wrong or unexposed side.

From the foregoing it will be readily understood that my invention embraces a construction which gives to the right or exposed side of the production a uniform finish and that

the result is accomplished by the coöperation of two scrolls, one of which is substantially less yielding to variations in the material than the other, so that such variations affect the position of one fold and not the other.

The adjusting-screws $f^2 f^3$ are provided to better adapt the folder to extreme ranges of production. To illustrate, suppose the folder is to be used for the production of muslin underwear, the adjusting-screws $f^2 f^3$ would not be employed to effect the action of the spring F; but if a production made from materials of extreme thickness—such, for instance, as heavy cotton-duck or heavy woolen fabrics—then in such instances the spring F would, by the adjusting-screws $f^2 f^3$, be adjusted to properly guide and fold the thinnest of the seam, leaving the automatic action of the scroll E to control the thicker portions. The screw f^2 , which is threaded to the base-plate member C', when advanced depresses the arched portion of the spring and stiffens or strengthens it. The screw f^3 , which is also threaded to the base-plate member C', when raised lifts the free end of the spring on its shoulder f^6 and varies the adjustment between the two scrolls.

Although I do not limit myself to the form of mounting of the scroll E, nevertheless the form shown in the drawings has material advantages. Thus the spring F, being fixed at f' , carries the scroll E on its free end and is attached to the scroll E close to the exit end of the scroll. This gives the scroll the capacity of yielding bodily in a horizontal plane and also the capacity of rocking or tipping in a horizontal plane relatively to the line of feed. By having the entrance end of the scroll E rest against the base-plate at the points C³ and C⁴ the yielding action may be substantially confined to the exit end.

Although the scroll D is shown as made separate from and soldered to the base-plate,

yet if the base-plate were constructed of a continuation integral with the scroll D it would not depart from my invention.

What I claim as my invention, and for which I ask for Letters Patent, is—

1. A lap-seam folder, comprising a base-plate, a lower scroll, a spring to one end of which said scroll is affixed, the other end of the said spring being secured to the base-plate and permitting a horizontal movement of the scroll, and an upper scroll rigidly affixed to the base-plate, whereby a uniform gage of fold and stitching is maintained on the right or exposed side of the material being folded or sewed, and lack of uniformity confined to the wrong or unexposed side, substantially as described.

2. In a lap-seam folder, in combination, a base-plate, the folding-scrolls, means whereby said scrolls are respectively connected with said base-plate and means of adjustment in one of said connections whereby the relative position of the scrolls is adjusted; the means of connection for one scroll being substantially more yielding than the means of connection for the other scroll, whereby variations are substantially confined to one fold, substantially as described.

3. In a lap-seam folder, in combination, a base-plate, the folding-scrolls, a spring connecting one of said scrolls with said base-plate, relatively rigid means for connecting the other of said scrolls with said base-plate and means whereby the strength of said spring may be adjusted, substantially as described.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 3d day of February, A. D. 1898.

SAMUEL H. WHEELER.

Witnesses:

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