

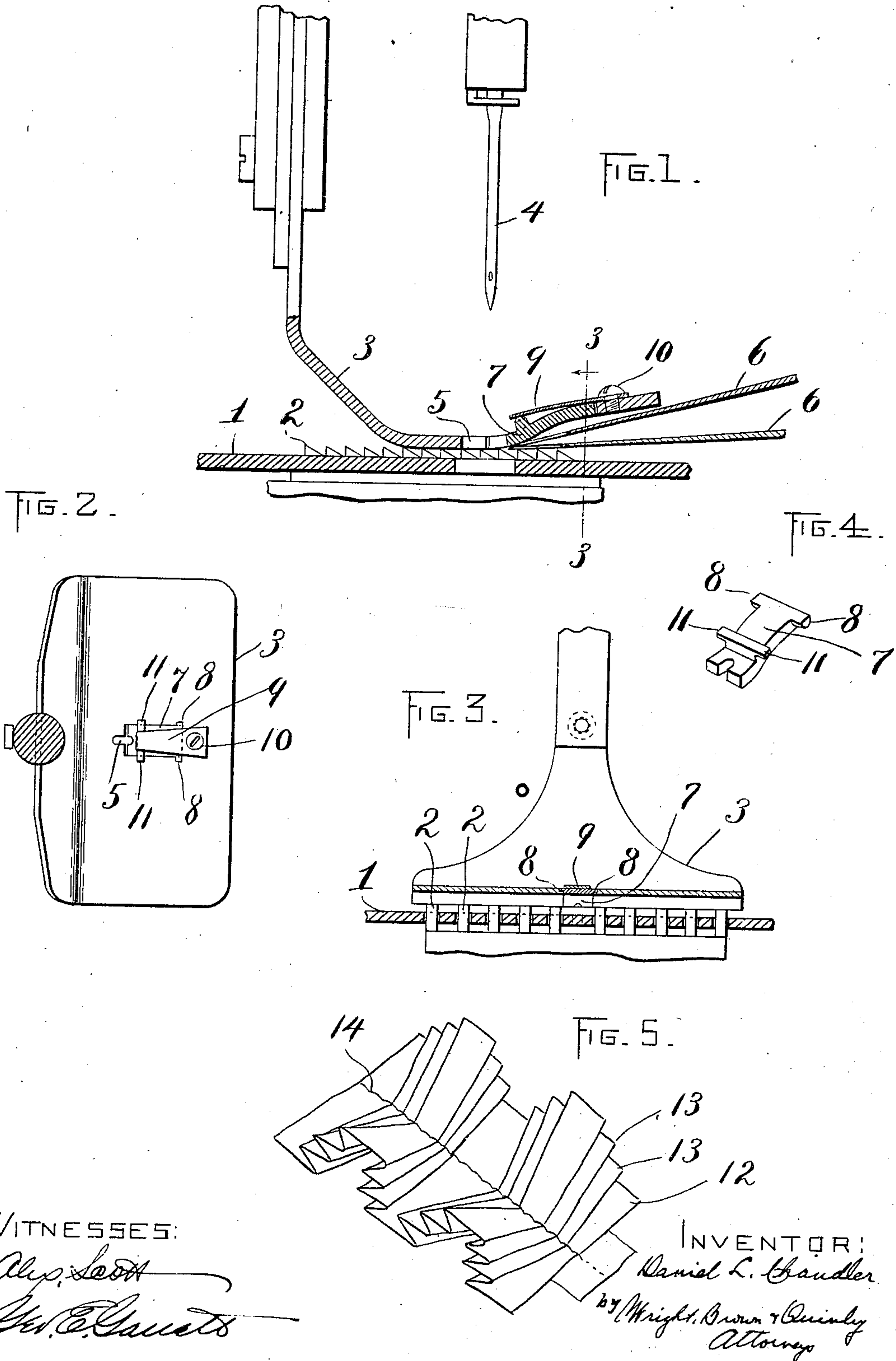
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PATENTED APR. 21, 1903.

D. L. CHANDLER.  
PRESSER FOOT FOR SEWING MACHINES.

APPLICATION FILED JAN. 24, 1902.

NO MODEL.





# UNITED STATES PATENT OFFICE.

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## PRESSER-FOOT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 725,929, dated April 21, 1903.

Application filed January 24, 1902. Serial No. 91,091. (No model.)

To all whom it may concern:

Be it known that I, DANIEL L. CHANDLER, of Ayer, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Sewing-Machines, of which the following is a specification.

This invention relates to sewing-machines; and it consists in certain improvements therein, which I shall now proceed to describe and claim.

Of the accompanying drawings, Figure 1 represents a vertical sectional view of sewing-machine plaiter parts constructed in accordance with my invention. Fig. 2 represents a plan view of the presser-foot. Fig. 3 represents a section on the line 3 3 of Fig. 1 with the plaiting-blades omitted. Fig. 4 represents a detail perspective view of the secondary presser. Fig. 5 represents a perspective view showing an example of the character of work upon which the machine is designed to operate.

The same reference characters indicate the same parts in all the figures.

My invention, of which a preferred embodiment is illustrated in the drawings, consists, generally speaking, in a mechanism for pressing on the fabric in the immediate vicinity of the needle in the manner more fully hereinafter specified by means movable independently of the movement of the main presser-foot.

1 represents the work-plate, through which operates a feeder composed of a row or series of toothed bars 2 2, acting through slots in the work-plate.

3 represents the yielding presser-foot co-acting in the ordinary manner with the feeder and work-plate.

4 represents the needle, operating through a needle-passage 5 in the presser mechanism, and 6 6 represent plaiting-blades acting to form plaits in the fabric, which are subjected to pressure between the presser mechanism and the work-plate, are stitched by the stitching mechanism, and are fed forward by the feeder.

7 is a secondary presser formed with trunnions or pivots 8 8, journaled in open-bearing depressions in the presser-foot 3, in which latter is cut a rectangular aperture adapted

to receive the presser 7. A flat spring 9, attached by a screw 10 to the presser-foot, yieldingly depresses the free rear end of the presser 7 into coaction with the work-plate 1, and a pair of projections 11 11 on the presser act as stops, in conjunction with the upper surface of the presser-foot, to limit the amount of depression of said free end. The spring 9 also by overlying the hinge-line of the presser 7 retains the trunnions of the latter in their open bearings.

It will be noted that the needle-passage 5 is formed partly in the presser-foot 3 and partly in the secondary presser 7. The free end of the latter bears on the fabric on both sides of the line of stitching in immediate proximity to the needle-path and can move vertically within limits independently of the vertical movement of the main presser-foot.

In Fig. 5, 12 represents a piece of ruching, having groups of knife-plaits 13 13 formed in it, each group consisting of a plurality of plaits formed in one direction and a plurality of succeeding plaits formed in the opposite direction, the plaits being secured by a longitudinal line of stitching 14. In making ruching of this or similar character with machines as constructed prior to my invention it is found that the first-formed plaits of a group will so raise the presser-foot of the machine that the fabric following them will not be pressed firmly against the work-plate. Therefore when the needle retreats after piercing the goods it draws the goods up with it, which in turn pulls up the thread and prevents the loop from being properly formed. The hook or under part of the stitching mechanism therefore often fails to act properly, which results in the formation of an imperfect or unlocked stitch. With my improvement, however, the auxiliary presser 7, because of its independent movement and the location of its free end in advance of the rear portion of the main presser-foot, remains with its said free end depressed below the main presser-foot when the latter is elevated by a bunch of plaits under its rear portion, and accordingly holds the fabric in the immediate vicinity of the needle under firm pressure at all times. It is essential to this action that the auxiliary presser shall not extend for any substantial



distance in the rear of the lateral plane through the needle, for in that case the bunch of plaits in the rear of the needle which lifts the presser-foot would also lift the auxiliary presser to substantially the same level. It is, furthermore, highly desirable to the proper working of the invention that the auxiliary presser should be of narrow width compared to the presser-foot, for then the auxiliary presser causes but little drag on the goods and is not raised by thick portions or irregularities which may exist in the margins of the goods.

It is obvious that this improvement is equally effective for various other classes of goods having an irregular or seamed formation, in which cases the auxiliary presser will hold the goods firmly under pressure in the vicinity of the needle, even though the presser-foot be raised at this locality by a seam or bunch in another portion of the goods.

In sewing-machines as ordinarily constructed the stitching and work-feeding parts form a combination in which the presser-foot performs the dual function of holding the work against the feeder when the latter acts and of holding the work against the work-plate when the stitch is being formed. This combination I have changed by dividing up the feeding and work-holding functions of the pressing means and assigning them to independently-movable elements. In sewing-machine plaiters as formerly constructed there is a further combination between the work-plate, the presser-foot, the stitch-forming mechanism, and the plaiting or folding mechanism which I have altered by dividing up

the functions of the work-pressing means between two independently-movable elements, one of which acts to hold the formed plaits under pressure, while the other acts independently to hold the goods in the vicinity of the needle under pressure while the plaits are being stitched.

I claim—

1. In a sewing-machine the combination with the main yielding presser, work-plate, feeder, needle, and plaiter-blade operating between said main presser and work-plate, of an auxiliary yielding presser of small width compared to that of the main presser and pivoted thereto forward of the lateral plane through the needle, its rear end terminating substantially at said plane.

2. A presser device for sewing-machines comprising a main presser formed on its upper side with open trunnion-bearings and with an aperture between said bearings, an auxiliary presser occupying said aperture and having trunnions mounted in said bearings, means to limit the downward movement of the free end of said auxiliary presser with respect to the main presser, and a spring attached to the main presser and extending over the hinge-line of the auxiliary presser to a bearing on the latter, whereby the auxiliary presser is retained in its bearings and its free end yieldingly depressed.

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

DANIEL L. CHANDLER.

Witnesses:

THOMAS L. HAZEN,  
P. H. HOOLEY.