(No Model.) 2 Sheets—Sheet 1.

W. R. PARSONS.

PRESSER FOOT FOR SEWING MACHINES.

No. 356,849. Patented Feb. 1, 1887.

Fig. 1.

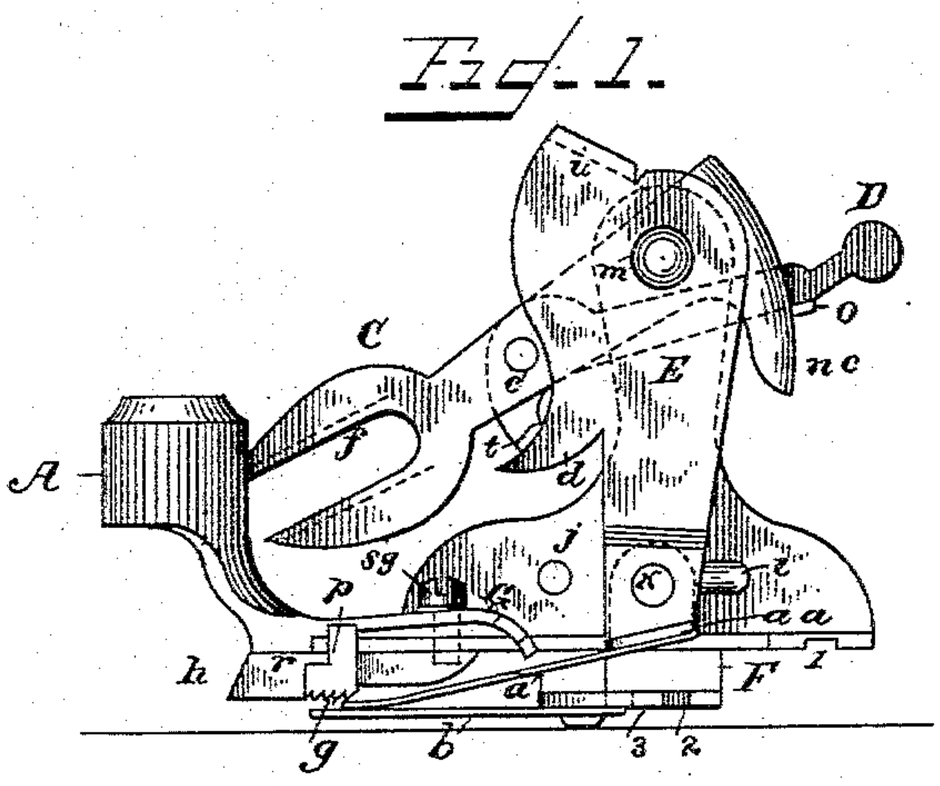


Fig. 2.

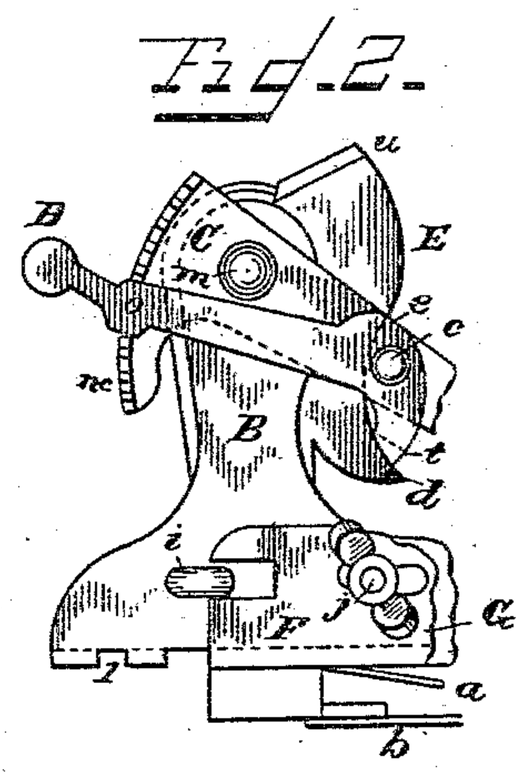


Fig. 3.

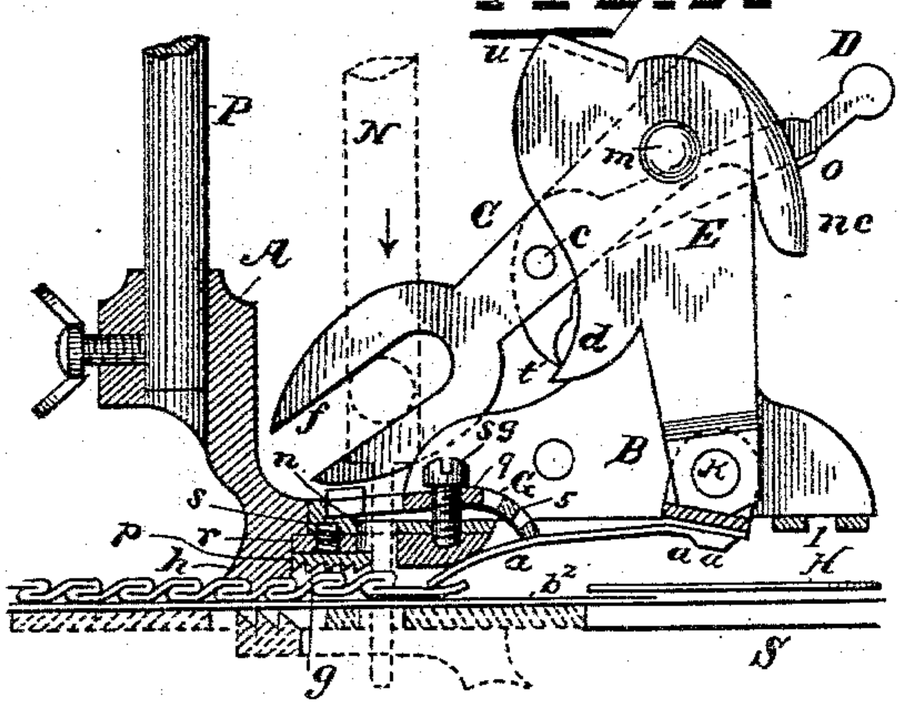


Fig. 4.

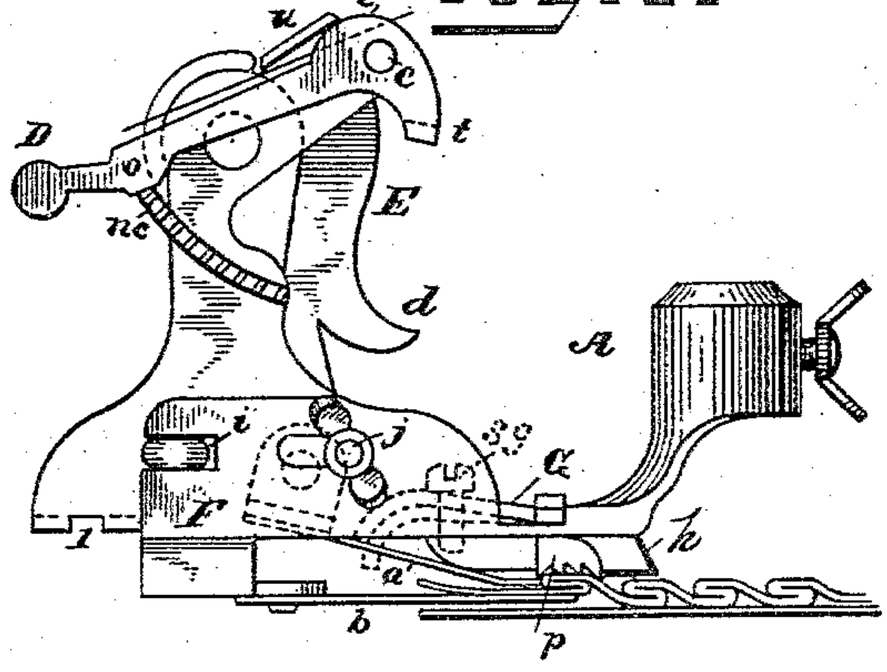
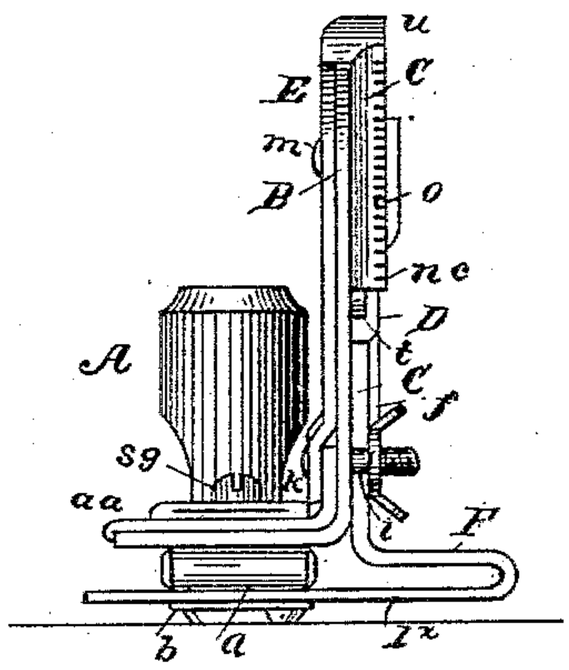


Fig. 5.



Witnesses:
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(No Model.) 2 Sheets—Sheet 2.

W. R. PARSONS.

PRESSER FOOT FOR SEWING MACHINES.

No. 356,849. Patented Feb. 1, 1887.

Fig. 6.

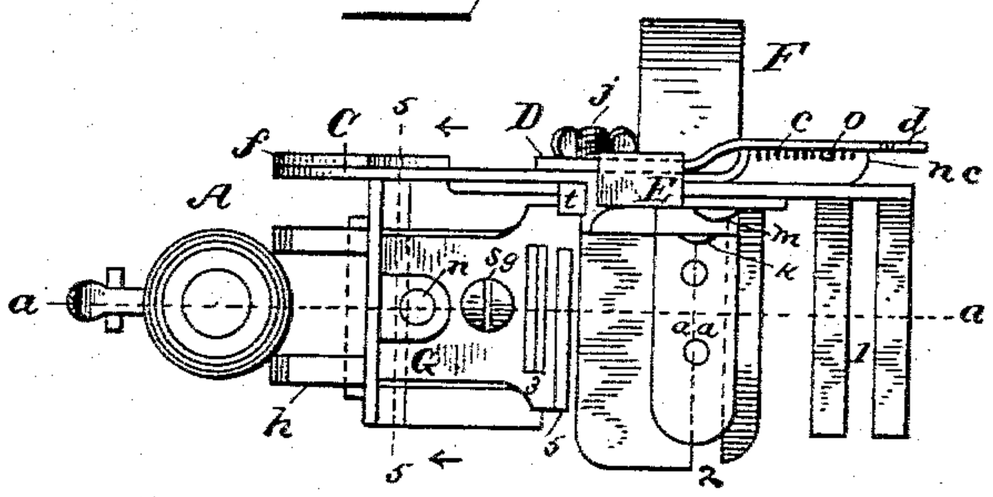


Fig. 7.

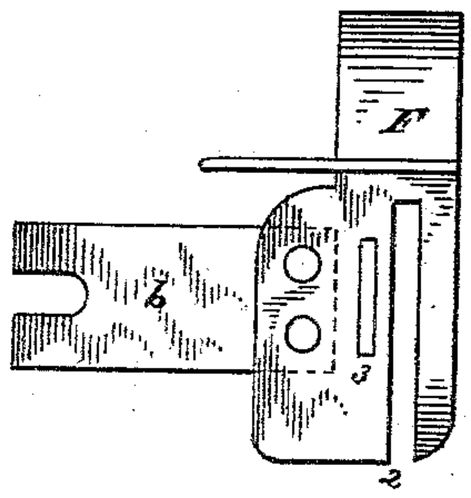


Fig. 8.

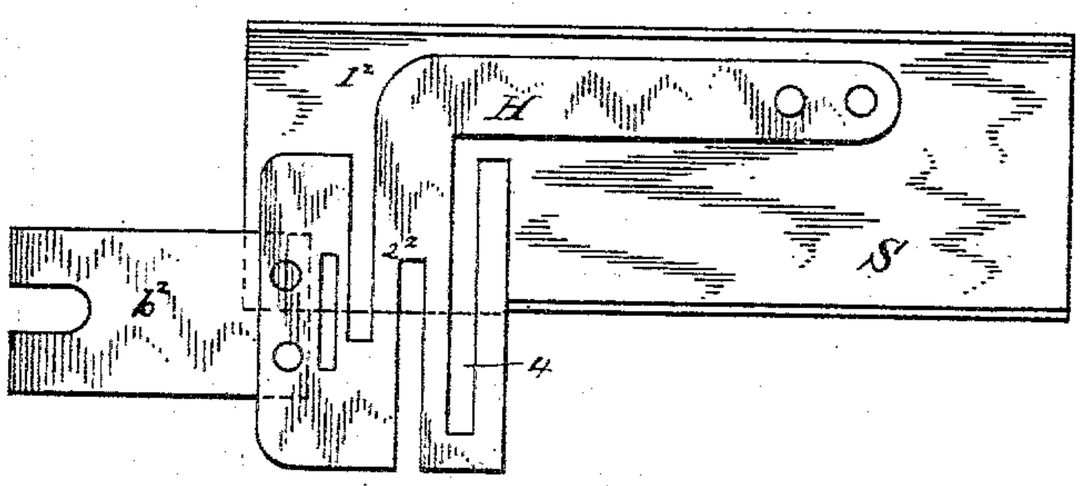


Fig. 9.

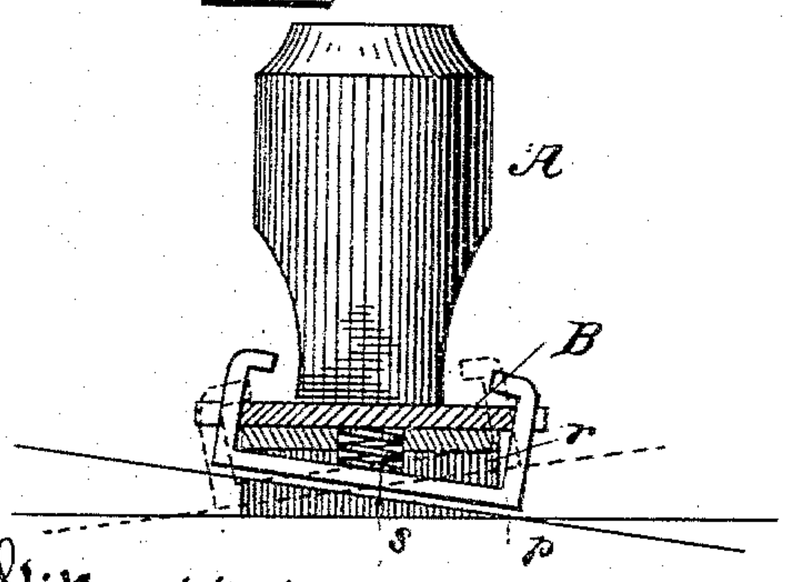
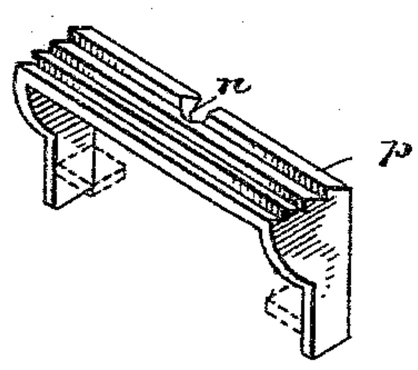


Fig. 10.



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UNITED STATES PATENT OFFICE.

WINSLOW R. PARSONS, OF CHICAGO, ILLINOIS, ASSIGNOR TO HARRY C. GOODRICH, OF SAME PLACE.

PRESSER-FOOT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 356,849, dated February 1, 1887.

Application filed December 5, 1885. Serial No. 184,820. (No model.)

To all whom it may concern:

Be it known that I, WINSLOW R. PARSONS, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented a new and useful Improvement in Presser-Feet for Sewing-Machines, of which the following is a full description, reference being had to the accompanying drawings.

One object of the present invention is to insure uniform or even work with the various kinds of fabrics commonly used by providing for tightly holding the sewed cloth beneath the foot independently of the unsewed cloth immediately following it, so as to prevent any slipping of either piece of cloth in the direction of the feed save as carried by the feed-dog, and where the presser-foot is used in a ruffling attachment by independent pressure on each gather or plait at and immediately behind the needle to prevent the retraction of the ruffle-piece or that part of it which is not yet sewed when the ruffling-blade is retracted.

As heretofore constructed, the presser part of the ruffler is lifted in the act of pushing up a gather or plait of thick or stiff cloth, and both pieces at times thus released are pushed through beneath said presser part independently of the feed, or, if adapted to accommodate gathers or plaits of thick or stiff cloth without its presser part being lifted, the ruffler does not securely hold the gathers or plaits of thinner or softer cloth against retraction. I provide by one and the same means against false movements of the cloth in either direction, as aforesaid, and am thus enabled to ruffle thick or thin and soft or stiff cloth with uniform fullness of gathers or width of plaits without aid from the operator. I provide by the same means for making the presser-feet for a given make of sewing-machines work with uniform excellence on all machines of said make, notwithstanding the unavoidable inequalities or variations in the tops of their throat-plates, cloth-plates, and feed-dog, with which the ruffler must coact.

Heretofore it has been common to find a ruffler which works well on one machine, while on other machines from the same factory the same ruffler works irregularly. I have discovered that this is due to variations in the machines, as aforesaid, which in some cases preclude uniform pressure on the crimps or gathers across the whole width of the ruffling-blade by the pressure heretofore used. My present invention affords such uniform pressure, or substantially uniform pressure, on the crimps or gathers at the point where they are successively completed and left, which is the vital point, across the whole width of the ruffling-blade, whatever the inequality of the top of the throat-plate, cloth-plate, or feed-dog may be, and thus avoids said difficulty.

The invention consists in the combination, with a non-rocking presser-foot, of a supplemental sole piece or plate pivotally connected therewith to rock transversely to the line of feed, whereby the sole-piece can assume a plane on its bearing-surface parallel to the plane of the feed-surface.

In the accompanying drawings, Figures 1 and 2 are side elevations showing my invention applied to a ruffling attachment for sewing-machines. Fig. 3 is another side elevation from the same point of view as Fig. 1, showing the ruffler, partly in longitudinal section, adjusted for shirring. Fig. 4 is another side elevation showing the same side as Fig. 2 with the ruffler adjusted for plaiting. Fig. 5 is an end view. Fig. 6 is a top view of the ruffler as seen in Fig. 1; and Figs. 7 and 8 are top views, respectively, of the removable separator-plate and the substitute shirring-blade, part shown in Fig. 3. Fig. 9 represents a magnified vertical section on the line 5 5 of Fig. 6; Fig. 10, a perspective view of the supplemental sole piece or plate of the presser-foot.

Like letters of reference indicate corresponding parts in the several figures.

The ruffling attachment, except as to the pivotal attachment of the supplemental sole piece or plate, constitutes the subject-matter of my application for Letters Patent filed July 19, 1884, Serial No. 138,212; but in order to enable my present invention to be clearly understood I have illustrated the entire ruffling mechanism, and will describe the same in connection with the improved presser-foot.

The ruffler comprises the non-rocking presser-foot A, a frame-piece, B, three lever parts, C, D, and E, the latter carrying the ruffling-blade *a*, and a separator part, F, carrying the

separating-blade *b*, with a clamp-piece, G, and accessories of the respective parts.

The presser-foot A and frame-piece B are rigidly and fixedly united with each other, and the former is adapted to be attached to the presser-bar of the sewing-machine, as at P, Fig. 3, as a substitute for the stitching presser-foot, in an ordinary manner.

The presser-foot A is constructed with a transverse recess, *r*, in its sole at and immediately behind the needle-hole *n*, and is provided at this point with a small spiral spring, *s*, projecting downward within said recess, and with a supplemental presser sole piece or plate, *p*, (shown detached and inverted in Fig. 10,) which embraces the recessed portion of the foot, and is held in place below the said spring *s* by passing its ends through slots in the frame-piece B and bending them down above the latter, thereby loosely connecting the sole-piece with the non-rocking presser-foot by what I term a "pivotal connection," in that it permits the sole-piece to freely rock as on a pivot.

In operation, as the ruffling-blade *a* advances to the position in which it is represented in Fig. 1 or that represented in Fig. 4, and deposits a crimp or gather or plait of the "ruffle-piece" of cloth in position beneath the needle, as shown in Fig. 4, said supplemental sole-piece *p* rises to accommodate the crimp or gather or plait, and permits the pressing surface or heel *h* of the presser-foot A to press with undiminished force upon both pieces of cloth as they lie beneath it, and thus provide against either piece of cloth being pushed through beneath said heel by the ruffling-blade. Moreover, owing to the adaptation of the supplemental sole to rise and fall independently of the main pressing-surface, as aforesaid, and its obvious adaptation to rise at either end, as well as bodily, and to rock transversely, said supplemental sole-piece is adapted to accommodate itself to the surface formed beneath it by the top of the sewing-machine throat-plate, cloth-plate, or feed-dog, and the interposed crimps, gathers, or plaits, so as to press uniformly, or with substantially uniform pressure on the latter, across the whole width of the ruffling-blade, notwithstanding inequalities in the tops of said machine parts. In retracting the ruffling-blade from its advanced position, there is in rufflers heretofore constructed a liability that the unsewed portions of the ruffle-piece will be drawn back so as to impair the crimps or gathers or plaits last formed, notwithstanding the transfixing thereof at the stitching-line by the needle. This is likewise effectually guarded against by the supplemental sole-piece pressing over the entire area in which the last crimp or gather or plait lies.

The sole-piece *p* is provided with creases or grooves. (Best seen in Fig. 10.) These are transverse with reference to the movement of the cloth, and preferably numerous and separated by ribs shaped like ratchet-teeth in cross-section, so that they shall not obstruct the movement of the cloth. The objects of these grooves are to keep fine crimps or gathers in shape and parallel with each other as they are completed and left beneath said sole-piece, so as to imitate "stroking" the ruffle, and to aid in preventing the retraction of crimps, gathers, or plaits by the ruffling-blade, as aforesaid. Fewer grooves and grooves of different shapes may answer for this purpose.

The manner of pivotally attaching the supplemental sole-piece and the number and form of its springs are considered wholly immaterial so long as its mode of operation above set forth is substantially preserved, so that it can rock transversely as on a pivot. The adaptation of the supplemental sole-piece to the surface upon which it rests is illustrated by the representation of the former at exaggerated inclinations in full and dotted lines in said Fig. 9. A pair of springs permit like movements; but a single spring is considered sufficient.

The frame-piece B, lever parts C D E, separator part F, and clamping-piece G, with the shirring-blade substituted for said separator part, and the several features and details of all these parts, form no part of the present invention, and so far as the same are novel and patentable they are hereby disclaimed in favor of another application for patent filed by me January 23, 1885, Serial No. 153,757. They are shown herein, and are to be considered as representing any suitable devices for completing a sewing-machine ruffler embodying a supplemental sole-piece adapted to rise and fall and rock transversely independently of the main or non-rocking presser-foot.

Having thus described my invention, what I claim is—

1. The combination, with a non-rocking presser-foot, of a supplemental sole piece or plate pivotally connected therewith to rock transversely to the line of feed, substantially as described.

2. The combination, with a non-rocking presser-foot having a transverse recess in its under side, of a supplemental sole piece or plate located in said recess and pivotally connected with the presser-foot to rock transversely to the line of feed.

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