(No Model.)

# J. DOUGLAS.

## PRESSER FOOT FOR SEWING MACHINES.

No. 478,095. Patented July 5, 1892.

Fig. 1.

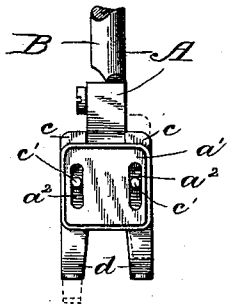



Fig. 2.

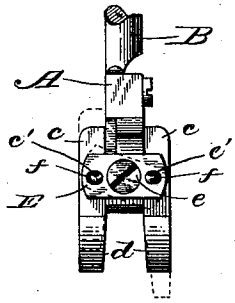



Fig. 3.

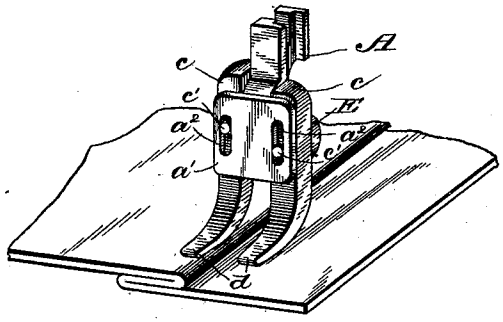



Fig. 4.

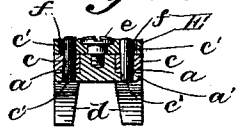
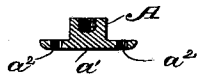



Fig. 5.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

JOHN DOUGLAS, OF ELIZABETH, NEW JERSEY, ASSIGNOR TO THE SINGER MANUFACTURING COMPANY OF NEW JERSEY.

## PRESSER-FOOT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 478,095, dated July 5, 1892.

Application filed March 11, 1892. Serial No. 424,587. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN DOUGLAS, a citizen of the United States, residing at Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Presser-Feet for Sewing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

In presenting work to the stitch-forming mechanism of a sewing-machine it frequently occurs that one portion of the work which comes beneath the presser-foot is thicker than the other portion thereof, so that the pressure of the presser-foot comes mostly or wholly upon one side of the work, which causes a tendency of the latter to move to the right or left, as the case may be, resulting in a crooked seam, unless great care is exercised by the operator to counteract this tendency of the work to move to the right or left by steadying or guiding the same by hand. It has heretofore been proposed to obviate this difficulty by providing one side of the presser-foot with a spring-pressed prong or toe, which will yield or move upwardly when the thicker portion of the work comes beneath it, so that the entire pressure of the presser-foot will not come upon the thick portion of the work; but in using a device of this kind it is obvious that it is adapted for use for the purpose intended only when the thick portion of the work comes on that side of the presser-foot having the spring-pressed prong or toe, and that it will not serve the purpose intended should the thick portion of the work come beneath the other side of the presser-foot.

My invention has for its object to obviate the difficulties referred to by providing a duplex presser-foot having two vertically-movable portions or feet connected with each other in such a way that they may both move up and down to accommodate themselves to different thicknesses of work passing beneath them, these two portions or feet being preferably connected together, so that as one moves up the other one moves down, and they will therefore automatically adjust themselves to varying thicknesses of work passing beneath them, maintaining an equal pressure upon each portion or foot, so that the pressure upon the work will be equal upon both sides of the feed, and the work will therefore naturally move straightforward without such a tendency to sidewise deflection as would result were the pressure upon the two parts of the duplex presser-foot uneven.

In the accompanying drawings, Figure 1 is a front view of my improved duplex presser-foot, showing the same attached to the lower end of the presser-bar. Fig. 2 is a rear end view of the same, and Fig. 3 is a front perspective view to illustrate the operation of my invention. Fig. 4 is a cross-section of my improved presser-foot, and Fig. 5 is a cross-section of the presser-foot shank.

A denotes the presser-foot shank adapted for attachment to the lower end of the presser-bar B. The shank A is provided with a recess *a* on each side of its central portion for the reception of the shanks *c* of the duplex presser-feet *d*. The front plate or portion *a'* of the shank A is provided forward of recesses *a* with vertical slots $a^2$ for the reception of pins *c'*, with which the shanks *c* of the presser-feet *d* are provided.

E is a button or short lever pivoted on a screw *e*, entering the rear side of the presser-foot shank A, the said button being provided with slots *f*, which are entered by the rear ends of the pins *c'*, which pass through the shank *c* of the presser-foot.

It will be apparent from the foregoing that as the shanks *c* of the duplex feet *d* are connected with each other by the pins *c'* and the lever or button E if one of the said feet be lifted the other will be correspondingly lowered, so that when a thicker portion of the work comes beneath one of the said feet than is passing beneath the other one foot will be somewhat lifted, and, being connected with the other foot by the lever or button E, the latter will be correspondingly depressed. This action will result, of course, in the automatic adjustment of the pressure on the two presser-feet, either of which is adapted to rise relative to the other to accommodate itself to thick portions of work, and owing to the fact that the said feet are connected by the button or lever E the pressure upon the same will be equalized, so that the work will have a tendency to move straight forward.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. The combination, with a single presser-foot shank, of two presser-feet, both of which are yieldingly connected with said shank and which are both vertically movable independently thereof, so that either of them is adapted to rise to accommodate a thick portion of the work passing beneath it.

2. The combination, with a presser-foot shank, of two vertically-movable presser-feet and a pivoted lever or button connecting the same, so that as one is lifted the other will be correspondingly lowered.

3. The combination, with the presser-foot shank A, provided with the recesses *a* and having a front plate or portion *a'*, provided with vertical slots $a^2$, of the presser-feet *d*, having shanks *c*, provided with pins *c'*, fitting in said slots, and the pivoted button or lever E, having slots which are also engaged by the said pins.

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

JOHN DOUGLAS.

Witnesses:
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