

May 8, 1934.

F. M. CARD

1,958,233

PRESSER FOOT FOR SEWING MACHINES

Filed Sept. 9, 1932

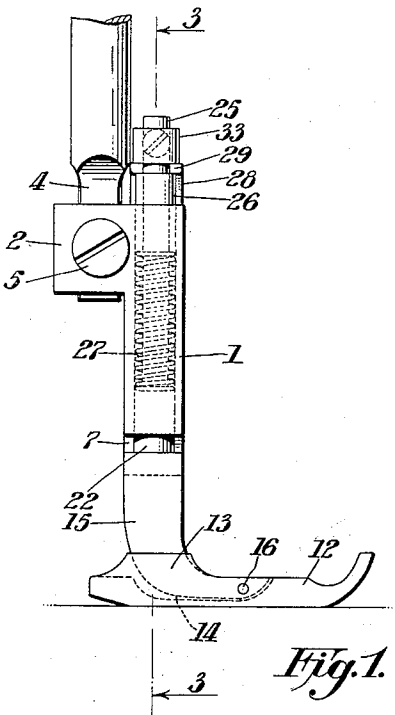


Fig. 1.

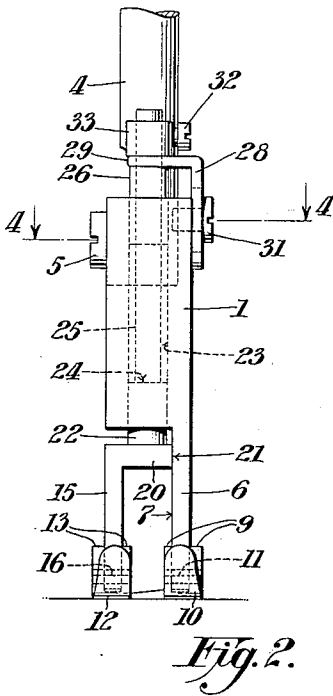


Fig. 2.

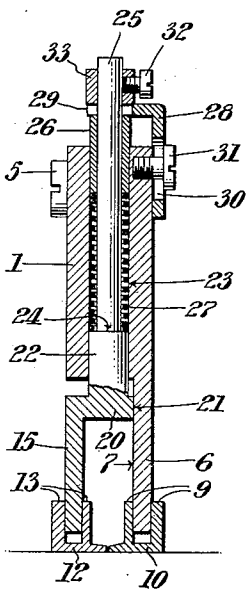


Fig. 3.

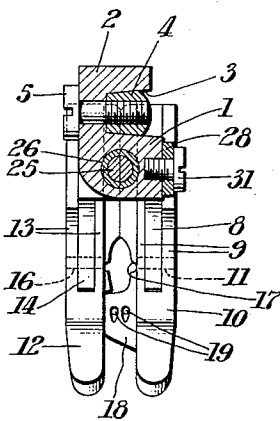


Fig. 4.

Inventor

Frederic M. Card

Witness:
Joseph P. ...

By Henry Miller

Attorney

UNITED STATES PATENT OFFICE

1,958,233

PRESSER-FOOT FOR SEWING MACHINES

Frederic M. Card, Bridgeport, Conn., assignor to
The Singer Manufacturing Company, Elizabeth,
N. J., a corporation of New Jersey

Application September 9, 1932, Serial No. 632,280

7 Claims. (Cl. 112—235)

This invention relates to improvements in presser-feet for sewing machines, and has for its object to provide a simple arrangement of relatively yielding work-engaging sections in a presser-foot detachable as a unit from a sewing machine presser-bar.

The invention will be readily understood from the following description of a preferred embodiment thereof in connection with the accompanying drawing, in which:

Fig. 1 represents a view in side elevation of the presser-foot and of the lower end of a presser-bar to which it is secured. Fig. 2 is a front elevation of the same. Fig. 3 is a vertical section of the presser-foot substantially on the line 3—3 of Fig. 1. Fig. 4 is a horizontal section of the presser-foot substantially on the line 4—4 of Fig. 2.

Referring to the drawing, the presser-foot has a shank 1 comprising preferably a rectangular block from the upper end of which extends rearwardly a lug 2 provided in one side face with a recess 3 embracing the slabbled lower end of a presser-bar 4 to which the presser-foot is secured by a screw 5. The flat side walls of the recess 3 are preferably inclined oppositely to approach each other toward the base of said recess and the opposed slabbled faces of the presser-bar are correspondingly inclined to thereby provide for readily fitting the presser-foot to the presser-bar and for firmly securing the presser-foot. The presser-bar 4 may be spring depressed in any usual or suitable manner (not shown).

Depending from the shank-block 1 and preferably integral therewith is a primary leg-member 6 presenting at one side a flat vertical guide-wall 7 and terminating at its lower end in a forwardly curving tongue 8 extending between the usual upstanding flanges 9 of a primary sole-piece 10. The sole-piece 10 is pivotally connected to said tongue 8 by a pin 11 which provides a pivotal axis for the sole-piece 10 transverse to the length of said sole-piece.

Disposed adjacent to the sole-piece 10 is an auxiliary sole-piece 12 which likewise has upstanding flanges 13 receiving therebetween a tongue 14 extending forwardly from an auxiliary leg-member 15, said sole-piece 12 being pivotally connected to the tongue 14 by a transverse pin 16 in alignment with the pin 11. Adjacent edges of the sole-pieces 10 and 12 are cut away to provide therebetween a needle and piercer opening 17, while a laterally extending fin 18 of the sole-piece 10 is provided with cord apertures 19 commonly employed in hemstitching machine presser-feet.

The auxiliary leg-member has a laterally offset portion 20 providing a flat edge 21 slidably engaging the guide-wall 7 of the primary leg-member, whereby the auxiliary leg-member is restrained against turning relatively to the primary leg-member. Rising from the offset-portion 20, and preferably integral therewith, is a cylindrical bar 22 slidably fitted into the lower end of a vertical bore 23 provided in the shank-block 1, said bar being reduced to provide an abutment shoulder 24 within the bore 23 and a reduced bar-extension 25 passing slidably through an abutment sleeve 26 adjustably disposed within the upper end of the bore 23. Interposed between the lower end of the abutment sleeve 26 and the abutment shoulder 24 is a coil spring 27 embracing the bar-extension 25, the vertical position of the abutment sleeve 26 being determined by an angle-piece 28 of which one member has a fork 29 embracing the bar-extension 25 above the sleeve and the other member has a vertical slot 30 receiving a screw 31 by means of which the angle-piece 28 is secured for vertical adjustment upon the shank-block 1. Adjustably secured by a screw 32 upon the bar-extension 25 above the fork 29 of the angle-piece is a collar 33 which limits downward movement of the auxiliary presser under the action of the spring 27.

The pressure exerted by the spring 27 may be varied by vertical adjustment of the angle-piece 28 to change the position of the sleeve 26, the position of the collar 33 upon the bar-extension 25 determining the limit of downward movement of the auxiliary sole-piece relatively to the primary sole-piece. It will be understood that after the sole-pieces are lowered upon the work, the collar 33 may be spaced from the angle-piece 28 dependent upon the character of the work, so that the auxiliary presser or sole-piece 12 may adjust itself to progressively different thicknesses of work by a downward movement of said sole-piece as well as by an upward movement thereof, and independently of the primary presser or sole-piece. The arrangement nevertheless provides for obtaining an initial position of the auxiliary sole-piece either higher or lower than the primary sole-piece, whereby the presser-foot is particularly adapted for use in hemstitching and like machines wherein a hemfold or the like passes under one sole-piece and a relatively thinner portion of the work passes under the other sole-piece.

Having thus set forth the nature of the invention, what I claim herein is:—

1. A presser-foot having a supporting shank

- adapted to be detachably secured upon the presser-bar of a sewing machine, a primary sole-piece carried by said shank, an auxiliary sole-piece carrying leg-member mounted upon said supporting shank for vertical movement thereupon, a spring carried by said presser-foot acting to depress said auxiliary leg-member, relatively adjustable opposed abutments for said spring provided upon said shank and auxiliary leg-member, and adjustable means for limiting the downward movement of said auxiliary leg-member under the action of said spring.
2. A presser-foot having a supporting shank adapted to be detachably secured upon the presser-bar of a sewing machine, a primary sole-piece carried by said shank, an auxiliary sole-piece carried by said shank for vertical movement relative to the primary sole-piece, a spring carried by said presser-foot acting to depress said auxiliary leg-member relatively to the primary sole-piece, an abutment for said spring adjustably mounted upon said shank for changing the pressure exerted by said spring, and adjustable means for limiting the downward movement of said auxiliary leg-member under the action of said spring.
3. A presser-foot having a supporting shank provided with a vertical bore and adapted to be detachably secured upon the presser-bar of a sewing machine, a primary sole-piece carried by said shank, an auxiliary sole-piece carrying bar vertically slidable in said shank-bore, an abutment-sleeve vertically adjustable in said shank-bore, a spring reacting against said sleeve to depress said bar, and means for limiting the downward movement of the sole-piece carrying bar under the action of said spring.
4. A presser-foot having a supporting shank provided with a vertical bore, a primary sole-piece carried by said shank, an auxiliary sole-piece carrying bar vertically slidable in the shank-bore, a sleeve slidably disposed in said shank-bore, a spring reacting against said sleeve to depress the auxiliary sole-piece carrying bar, adjustable means carried by said shank for limiting movement of said sleeve in one direction, and means for limiting downward movement of the sole-piece carrying bar under the action of said spring.
5. A presser-foot having a supporting shank provided with a vertical bore, a primary sole-piece carried by said shank, an auxiliary sole-piece carrying bar vertically slidable in the shank-bore and having a reduced extension within said bore, a sleeve slidably disposed in the shank-bore and slidably receiving said bar-extension, a spring disposed within said bore and reacting against said sleeve to depress the auxiliary sole-piece carrying bar, adjustable means carried by said shank for limiting upward movement of said sleeve, and means for limiting downward movement of said bar under the action of said spring.
6. A presser-foot having a supporting shank provided with a vertical bore, a primary sole-piece carried by said shank, an auxiliary sole-piece carrying bar vertically slidable in the shank-bore and having a reduced extension within said bore, a sleeve slidably disposed in the shank-bore and slidably receiving said bar-extension, a spring disposed within said bore and reacting against said sleeve to depress the auxiliary sole-piece carrying bar, an angle-piece secured for vertical adjustment upon said shank and overlying said sleeve, and a collar adjustably disposed upon said bar-extension above said angle-piece.
7. A presser-foot comprising a rectangular shank-block having a vertical bore, a lug projecting from said shank-block and having a presser-bar receiving recess, a primary leg-member depending from said shank-block and presenting a substantially flat vertical guide-wall, a primary sole-piece pivotally connected with said leg-member, a bar slidably disposed in said shank-bore, a spring carried by said shank-block for depressing said bar a predetermined extent, means for adjustably determining the pressure exerted by said spring, an auxiliary leg-member carried by the lower end of said bar and having an edge slidably engaging said guide-wall of the primary leg-member, an auxiliary sole-piece pivotally attached to said auxiliary leg-member, and adjustable means for limiting the downward movement of said auxiliary leg-member under the action of said spring.

FREDERIC M. CARD.

50 125

55 130

60 135

65 140

70 145

75 150