

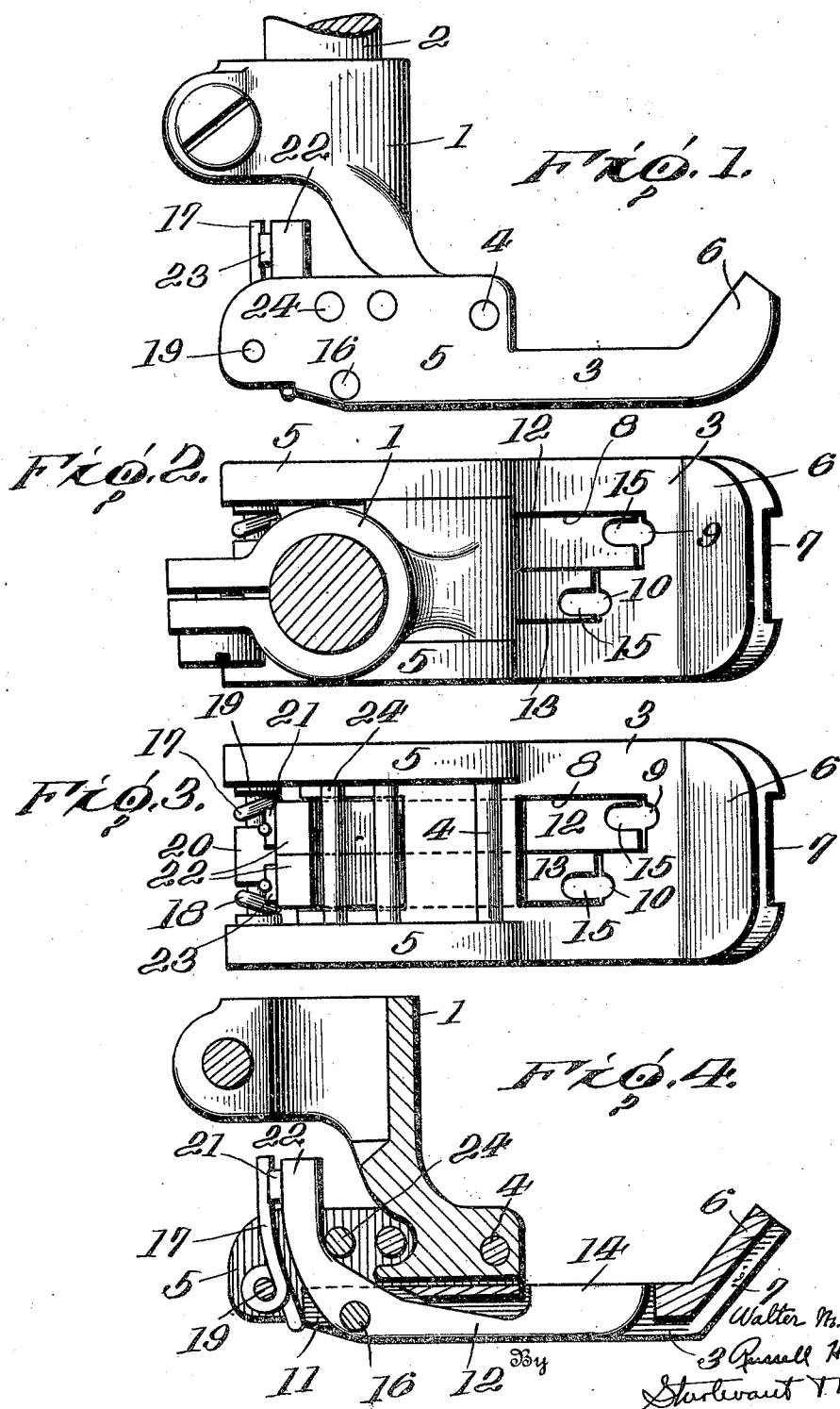
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PRESSER FOOT FOR SEWING MACHINES

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UNITED STATES PATENT OFFICE.

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PRESSER FOOT FOR SEWING MACHINES.

Application filed November 24, 1926. Serial No. 150,460.

The invention relates to new and useful improvements in a presser foot for sewing machines, and more particularly to a presser foot for felling.

5 An object of the invention is to provide a presser foot having a channel extending lengthwise thereof for guiding the fabric sections for felling, and fingers located in the channel for engaging the enchain-
10 thread loops for holding the thread loops during chaining off, wherein the yielding means for moving the fingers is carried by the foot portion so as to rock with the foot portion during the operation of the presser
15 foot.

A further object of the invention is to provide a presser foot of the above type, with means for increasing the tension of the spring on the finger.

20 These and other objects will in part be obvious and will in part be hereinafter more fully disclosed.

In the drawings which show by way of illustration one embodiment of the inven-
25 tion—

Figure 1 is a side view of a presser foot embodying the invention;

Fig. 2 is a plan view of the same;

30 Fig. 3 is a plan view of the foot portion removed from its supporting shank or bracket, and

Fig. 4 is a vertical sectional view through the presser foot and supporting shank there-
for.

35 The invention is directed particularly to a presser foot for felling, and the presser foot includes a shank portion which is attached to the usual presser bar, and a foot portion which is pivoted to the shank, so as to rock or
40 tilt thereon during the operation of the presser foot. The foot portion is provided with a channel extending from the front to the rear thereof for guiding the fabric sections. Located in this channel, and forming
45 the upper wall thereof, are a plurality of fingers, when more than one needle is used, one for each needle. These fingers are separately pivoted, and are so disposed as to engage the thread loops directly in rear of the
50 needles so as to aid in chaining off between articles. These chaining fingers are yieldingly pressed downward at their forward ends, by tension springs, one spring for each finger, and the tension springs are mounted

on the foot portion of the presser foot, so 55 that as the foot portion tilts up and down, the tension of the springs will not be varied; and furthermore, so that the tension of the springs will not prevent the foot portion from freely tilting up and down. 60

In the application of Joseph Berger Serial No. 121,425, filed July 9, 1926, there is shown a presser foot for felling having chaining fingers for engaging the enchain- 65 thread loops in rear of the needles, and also having a channel for guiding the fabric sections which are being stitched together. The present invention is directed to an improvement upon the presser foot of said application, and is directed particularly to the mounting of the 70 springs which bear upon the yielding fingers for holding them yieldingly in contact with the enchain- thread loops.

The presser foot includes a shank portion 1 which is clamped to the lower end of a 75 presser bar 2. Pivoted to this shank portion 1 is the foot portion 3 of the foot. Said foot portion is joined to the shank by a pivot pin 4. The foot portion has side members 5, 5, be- 80 tween which the shank portion 1 extends, and the pivot pin 4 is mounted in these side members 5, 5. The foot portion 3 has an upturned toe 6. There is a channel 7 which extends all the way across the foot portion from front to rear centrally thereof, and this 85 channel 7 extends upwardly along the under face of the toe 6. The foot portion 3 is provided with a recess 8. This recess 8 terminates at its forward end in semi-circular recesses 9 and 10. These recesses 9 and 10 are 90 for the needles. The under face of the presser foot has an enlarged recess 11, and located in this enlarged recess 11, as shown in the present embodiment of the invention, are two chaining fingers 12 and 13. Each finger 95 has an upturned portion 14, and at the forward end of each finger there is a recess 15. These recesses 15, together with the recesses 9 and 10, form the recesses for the respective 100 needles.

The chaining fingers 12 are pivoted to the foot portion by a pivot pin 16. This pivot pin is well toward the rear of the foot portion. Mounted on the foot portion are two springs 17 and 18. A pin 19 extends across the foot 105 portion, and these springs 17 and 18 are each provided with a coil through which the pin 19 passes. There is a collar 20 between these

springs for holding the same separated. The upper end of the spring 17 bears against an adjustable screw 21 carried by the upwardly extending portion 22 of the chaining finger 12. The lower end of this spring 17 bears against the foot portion, and the spring is so constructed as to turn and normally press the chaining finger 12 in a clockwise direction as viewed in Fig. 4, and this will yieldingly press the forward end of this finger downwardly. The upper end of spring 18 bears against an adjustable screw 23, and the lower end of the spring 18 bears against the foot portion, and thus it is that the spring 18 normally operates to depress the forward end of the chaining finger 13.

The forward portions of these yielding fingers are directly in rear of the needles, and bear against the solid portion of the throat plate, as in the Berger structure. When the presser foot is raised, a pin 24 serves as a stop for limiting the downward movement of the free ends of said chaining fingers.

The sections of material which are to be joined in a felled seam, are interfolded and pass along the channel 7. These chaining fingers will yield at their forward ends and allow the fabric sections to pass underneath, thus the side walls of the channel will guide the fabric sections until they are united by stitching. This guiding channel gradually decreases in depth as the chaining fingers are substantially flush with the lower face of the presser foot in the region of their pivotal support. When the material being stitched passes out from beneath the presser foot, the chaining fingers will move down into engagement with the enchain thread loops formed by the stitching mechanism, and will prevent the thread loops from becoming loose, so as to cause the skipping of stitches when there is no material being stitched, and will furthermore, aid in the feeding of the enchain thread loops. By mounting the springs on the foot section, then the chaining fingers and controlling springs therefor will tilt as a unit with the foot section, and therefore, the springs do not interfere with the free tilting of the foot portion, and the tension of the springs is not varied by the tilting of the foot portion. The tension of the springs on the chaining fingers may be readily varied by the respective screws against which the upper ends of the springs bear.

It is obvious that minor changes in the details of construction and the arrangement of the parts may be made without departing from the spirit of the invention as set forth in the appended claims.

Having thus described the invention, what we claim as new and desire to secure by Letters Patent, is—

1. A presser foot for sewing machines comprising a support, a foot portion pivoted to said support and having a needle hole and a

channel extending lengthwise thereof for guiding the fabric sections for felling, a finger located in said channel and pivoted to the foot portion adjacent the rear end thereof, said finger terminating at the needle hole in the foot, and means carried by the foot portion for yieldingly depressing the forward end of said finger.

2. A presser foot for sewing machines comprising a support, a foot portion pivoted to said support and having a needle hole and a channel extending lengthwise thereof for guiding the fabric sections for felling, a finger located in said channel and pivoted to the foot portion adjacent the rear end thereof, said finger terminating at the needle hole in the foot, means carried by the foot portion for yieldingly depressing the forward end of said finger, and means for limiting the downward movement of the finger.

3. A presser foot for sewing machines comprising a support, a foot portion pivoted to said support and having a needle hole and a channel extending lengthwise thereof for guiding the fabric sections for felling, a finger located in said channel and pivoted to the foot portion adjacent the rear end thereof, said finger terminating at the needle hole in the foot, means carried by the foot portion for yieldingly depressing the forward end of said finger, means for limiting the downward movement of the finger, and means for varying the yielding pressure of the finger.

4. A presser foot for sewing machines comprising a supporting bracket, a foot portion pivoted thereto and having a channel extending lengthwise thereof for guiding the fabric sections for felling, chaining fingers located in said channel and pivoted to the foot portion adjacent the rear end thereof, said chaining fingers terminating at the needle holes in said foot portion, and a spring for each chaining finger mounted on the foot portion and movable with said foot portion on its pivotal connection to the supporting bracket.

5. A presser foot for sewing machines comprising a supporting bracket, a foot portion pivoted thereto and having a channel extending lengthwise thereof for guiding the fabric sections for felling, chaining fingers located in said channel and pivoted to the foot portion adjacent the rear end thereof, said chaining fingers terminating at the needle holes in said foot portion, a spring for each chaining finger mounted on the foot portion and movable with said foot portion on its pivotal connection to the supporting bracket, and means carried by the foot portion for limiting the downward movement of the free end of the chaining fingers.

6. A presser foot for sewing machines comprising a supporting bracket, a foot portion pivoted thereto and having a channel extending lengthwise thereof for guiding the fabric sections for felling, chaining fingers located

in said channel and pivoted to the foot portion adjacent the rear end thereof, said chaining fingers terminating at the needle holes in said foot portion, a spring for each chaining finger mounted on the foot portion and movable with said foot portion on its pivotal connection to the supporting bracket, means carried by the foot portion for limiting the downward movement of the free end of the chaining fingers, and means whereby the tension of the springs may be independently adjusted.

7. A presser foot for sewing machines comprising a supporting bracket, a foot portion pivoted thereto and having a channel extending lengthwise thereof on its under face for guiding the fabric sections for felling, independent chaining fingers pivotally mounted

on said foot portion and forming the upper wall of said guiding channel in rear of the needles, a spring for each chaining finger having a coil therein, a pin carried by the foot portion extending through the coils in the springs, a collar for holding the springs separated, an adjustable screw mounted on each chaining finger and adapted to be engaged by its respective spring, and a stop carried by the foot portion for limiting the downward movement of the chaining fingers when the foot portion is raised.

In testimony whereof, we affix our signatures.

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