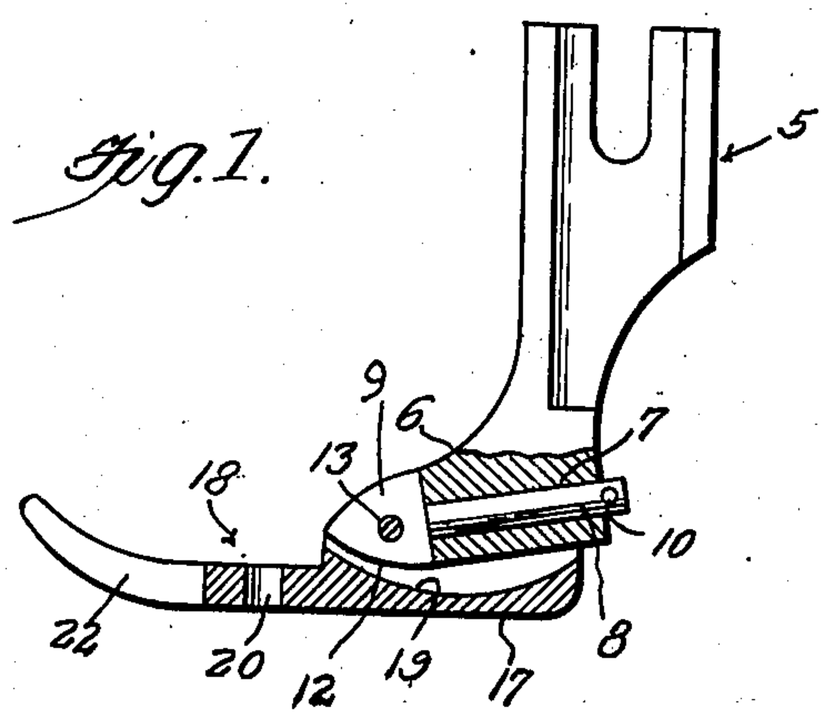
March 30, 1943. B. ANTONELLI 2,314,861

SEWING MACHINE PRESSER FOOT

Filed May 8, 1941

Fig. 1.



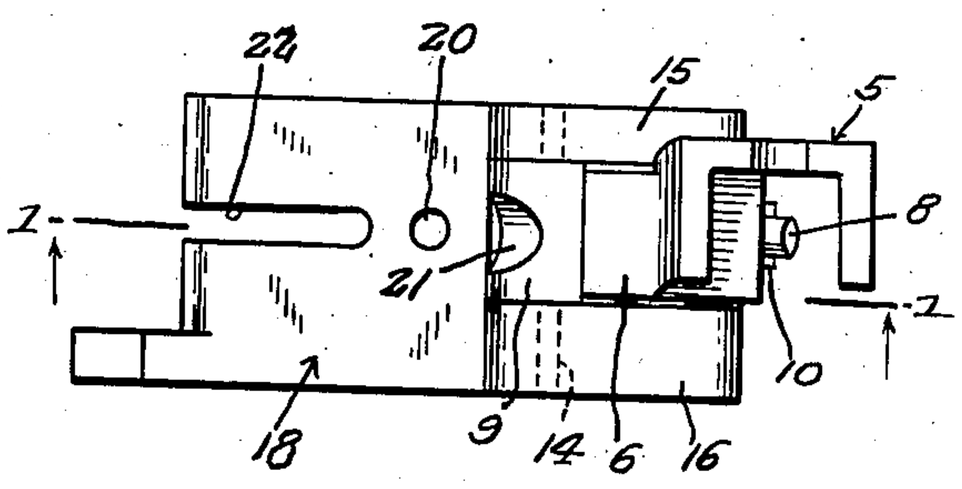


Fig. 2.

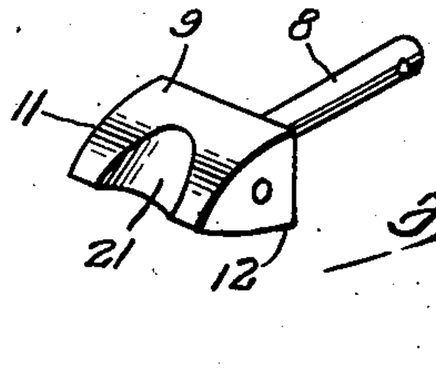


Fig. 3.

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UNITED STATES PATENT OFFICE

2,314,861

SEWING MACHINE PRESSER FOOT

Bruno Antonelli, Fall River, Mass.

Application May 8, 1941, Serial No. 392,539

1 Claim. (Cl. 112—235)

My invention relates to improvements in sewing machine presser feet and particularly to means therein permitting a limited universal movement of the foot relative to the shank causing the foot to follow the work more uniformly and exert a more even pressure thereon, and the primary object of my invention is to provide a simple and efficient arrangement of this character of relatively simple and inexpensive construction, composed of relatively few parts.

Other important objects and advantages of my invention will be apparent from a reading of the following description taken in connection with the drawing, wherein for purposes of illustration I have shown a preferred embodiment of my invention.

In the drawing:

Figure 1 is a general vertical longitudinal sectional view taken through Figure 2 along the line 1—1 and looking upwardly in the direction of the arrow.

Figure 2 is a top plan view of Figure 1.

Figure 3 is a perspective view of the joint element.

Referring in detail to the drawing, the numeral 5 generally designates a conventional form of vertical shank having a generally U-shaped horizontal cross section as indicated in Figure 2 and terminating at its lower end in a forwardly and slightly downwardly declining elongated terminal 6 which is generally rectangular in cross section and provided with a centralized longitudinal bore 7 rotatably receiving the shaft 8 which projects from the head 9 in a rearward and upward direction, the head 9 forming a shoulder bearing against the forward end of the part 6. A pin 10 traversing the rear end of the shaft 8 holds the described parts rotatably associated together.

The head 9 is substantially rectangular in top plan and has a substantially triangular transverse cross section as indicated in Figures 1 and 3, the upper and lower surfaces 11 and 12, respectively, being convexly rounded.

A hinge pin 13 extends longitudinally through the head 9 at the approximate longitudinal center thereof and has its ends pivotally received as indicated by the numerals 14 in Figure 2 of the drawing in the laterally spaced longitudinal shoulders 15 and 16 which are formed on the heel portion 17 of the foot which is generally designated 18. The top of the heel portion 17 between the shoulders 15 and 16 is concaved or hollowed out as indicated by the numeral 19, a portion of the resultant depression acting as a guideway for the rounded under surface 12 of the head 9 of the shank member, whereby the shank 5 may pivot on the axis of the pivot pin 13 as well as laterally on the axis of the shaft 8, thereby achieving a limited universal action, the lateral limitation being provided by the inner sides of the shoulders 15 and 16 and the rocking on the pin 13 by the engagement of the under surface 12 of the head 9 with the depression 19.

As seen in Figure 2 of the drawing, the thread hole 20 is located immediately forwardly of the head 9 and the head 9 has a concavity 21 in its forward edge and upper surface 11 to accommodate the thread. The hole 20 is aligned with the usual slot 22 in the foot portion 18.

Although I have shown and described herein a preferred embodiment of my invention, it is to be definitely understood that I do not desire to limit the application of the invention thereto except as may be required by the scope of the subjoined claim.

Having described the invention, what is claimed as new is:

A sewing machine presser foot structure comprising a foot having a pair of laterally spaced shoulders, a transverse pivot pin extending between said shoulders, a joint element having a head pivoted on said pin, a shaft extending rearwardly from said head longitudinally of the foot, and a shank having a lower terminal positioned between said shoulders and pivoted on said shaft, said joint element and said foot having convex and concave faces, respectively, coacting to permit limited pivotal movement of the foot about the axis of the pin on which the head is pivoted.

BRUNO ANTONELLI.