Jan. 15, 1929. 1,699,314

G. SIEBER

PRESSURE FEET FOR VERTICAL NEEDLE EMBROIDERY MACHINES

Filed April 8, 1925

Fig.1

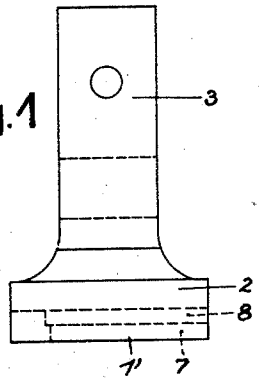


Fig.2

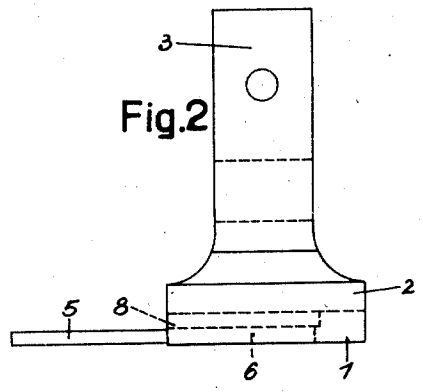


Fig.3

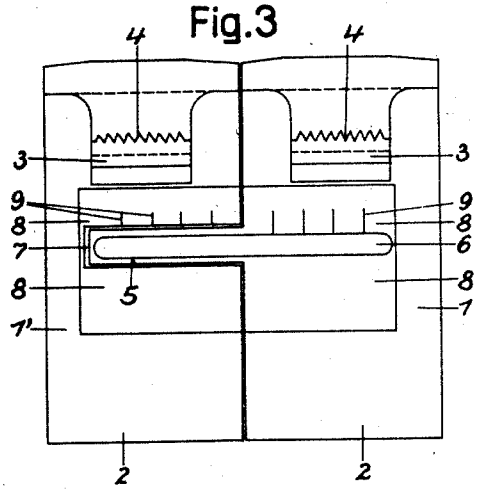


Fig.6

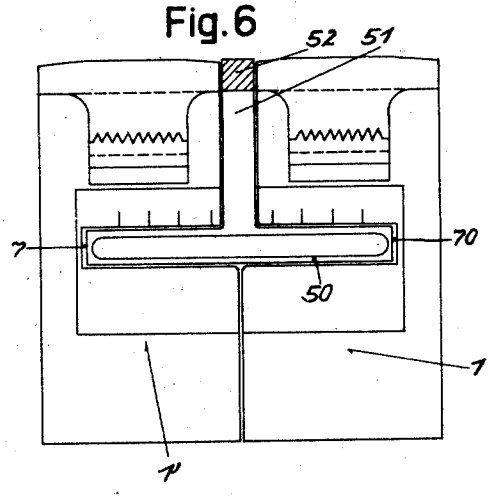


Fig.4

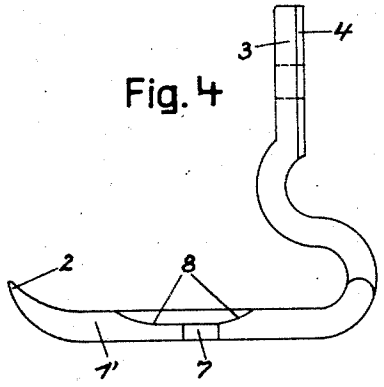
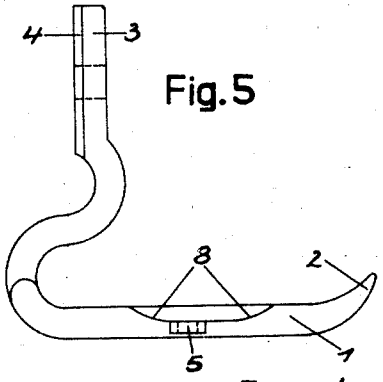


Fig.5



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UNITED STATES PATENT OFFICE.

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PRESSURE FEET FOR VERTICAL-NEEDLE EMBROIDERY MACHINES.

Application filed April 8, 1925, Serial No. 21,542, and in Germany May 22, 1924.

My invention relates to embroidery machines of the sewing machine type; more especially it relates to the provision of a double presser-foot for embroidery machines of said type.

With machines of the type mentioned which operate with oscillating or laterally vibrating needles, and with two presser-feet which can be thrown into and out of work engaging position independently of one another, a break in the thread is caused easily by the thread coming from the needle being caught in the space between the two presser-feet when the needle is being moved laterally, the thread being then subjected to excessive strain.

The object of my invention is to overcome that drawback and I attain that object, firstly, by letting the slot which must be provided in one of the presser-plates extend into a tongue projecting forth laterally in the direction of the other presser-plate whereby it is rendered possible to form for the thread a guide-slot which is closed all-around; and secondly, by providing in the other presser-plate a recess adapted to receive the tongue provided on the first presser-plate, as mentioned.

My invention is illustrated diagrammatically and by way of example, in the accompanying drawings in which Figures 1 and 2 are front-views of the two presser-feet, detached from the presser rods; Figure 3 is a plan of both presser-feet, which here are shown side by side, as near one another as possible; Figures 4 and 5 are side-views of the two presser-feet, one being shown from the lefthand side, the other from the righthand side; and Figure 6 is a view similar to Fig. 3 and shows a modification of the feet, as is all more fully described hereinafter.

Referring to Figures 1–5, each of the two presser-feet is provided with a presser-plate 1, and 1′ respectively, which is bent upwardly at its free end 2, and with a fastening plate 3, the rear face of which is provided with ribs 4 by which the proper horizontal position of the presser-plate on the presser-rod is ensured in every vertical position of each presser-foot on its respective rod.

The two presser-feet can be thrown into, and out of, work engaging position independently of one another. They are required in all cases in which it may be desired to connect by a fancy-stitch two fabric-edges located at some distance from one another. It is in such cases necessary to adjust the two fabric-edges independently of one another, and to re-adjust them while the sewing proceeds.

The presser-plate 1 is provided with a laterally projecting tongue 5 which is thinner than that plate itself. The bottom face of the tongue lies a little higher than the bottom-face of that plate so that the tongue presses upon the fabric not as strongly as does the said plate, whereby it results that after the other presser-plate (1′) has been lifted, the fabric-part lying below it can be shifted easily in spite of the tongue 5 extending over it.

The presser-foot is, furthermore, provided with a comparatively very long slot 6 located transversely with respect to the direction of feed of the fabric, one half of this slot lying in the presser-plate 1 proper and the other half lying in the tongue 5. The thread can travel along to and fro in the slot 6 when the needle is moved laterally, there being now no opportunity to get entangled, whereby the drawback mentioned in the introductory part of this specification is completely obviated.

Corresponding to the laterally projecting tongue 5 of the presser-plate 1, the presser-plate 1′ is provided with a recess 7 of such size that the tongue 5 can be received therein when the two presser-plates are located closely side by side, as in Fig. 3. Owing thereto, the two presser-plates can be lifted independently of one another in any of their relative positions.

In order to permit easy watching of the formation of the stitches and of the sewing operation both presser-plates are reduced in thickness, as at 8, along the slot 6 and along the recess 7, there being cavities 8 milled into the upper surfaces of the two plates. Besides short mark-lines 9 are provided for facilitating adjusting the fabric.

It will be obvious to experts that the improvement described can be modified in various ways without departing from the gist of the invention. One such modification is illustrated in Fig. 6, in which the thread-guiding slot is provided in a separate member 50 carried by an arm 51 extending forth from a vertical rod 52; the slotted member 50 extends into slots 7 and 70 provided in the two presser-plates. The rod 52 may be adjusted

vertically independently of the presser-feet rods, or may be connected with one or the other thereof.

I claim:

1. In a sewing-machine, the combination of two presser-foot plates, of which at least one is provided with a lateral recess, with a member extending into said recess and being provided with a slot adapted to guide the thread, the bottom-face of said member lying above the bottom-faces of the said presser-foot plates.

2. In a vertical needle embroidery machine, the combination of two presser-feet and of two presser-plates pertaining one to one of said feet, the other to the other thereof, and of which at least one is provided with a lateral recess, with a tongue-shaped member extending into said recess and being provided with a slot adapted to guide the thread, the bottom-face of said member lying above the bottom-faces of the said presser-foot plates.

3. In a sewing-machine, the combination of two presser-foot plates which are adjustable relatively to one another in horizontal direction, and of which at least one is provided with a lateral recess, with a member extending into said recess and being provided with a slot adapted to guide the thread.

4. In a vertical needle embroidery machine of the sewing-machine type, the combination of two presser-feet and of two presser-plates pertaining one to one of said feet, the other to the other thereof, and which are adjustable relatively to one another in horizontal direction, and of which at least one is provided with a lateral recess, with a tongue-shaped member extending into said recess and being provided with a slot adapted to guide the thread.

5. In a sewing-machine, the combination of two presser-foot rods and two presser-foot plates, of which one is attached to one of said rods, and the other to the other thereof, and of which at least one is adjustable horizontally at the appertaining rod, and of which, further, at least one is provided with a lateral recess, with a member extending into said recess and being provided with a slot adapted to guide the thread.

6. In a vertical needle embroidery machine, the combination of two presser-foot rods and two presser-foot plates, one of said plates being attached to one of said rods, and the other of said plates to the other of said rods, at least one of said plates being adjustable in horizontal direction at the appertaining rod, and at least one of said plates being provided with a lateral recess, with a tongue-shaped member extending into said recess and being provided with a slot adapted to guide the thread

In testimony whereof I affix my signature.

GOTTWALT SIEBER.