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DEVICE FOR FASTENING THE STITCH PLATE ON THE
LOWER PART OF A SEWING MACHINE
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2,770,207

Fig. 1.

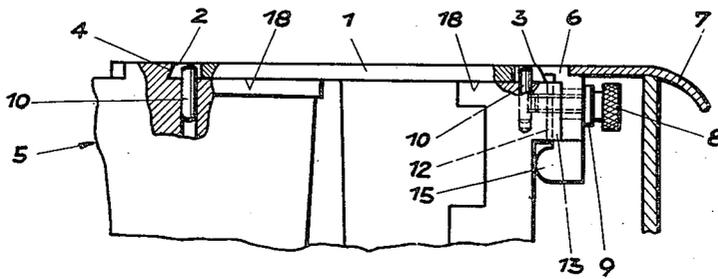


Fig. 2.

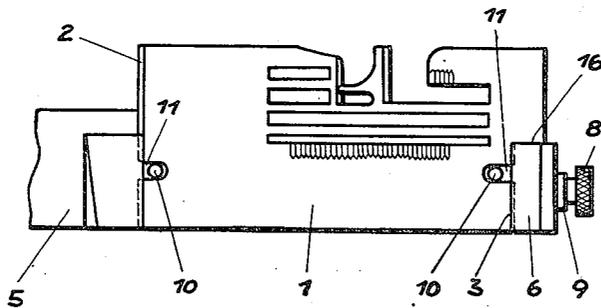


Fig. 3.

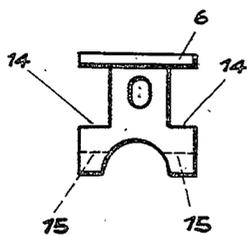
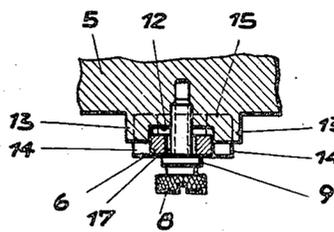


Fig. 4.



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DEVICE FOR FASTENING THE STITCH PLATE ON THE LOWER PART OF A SEWING MACHINE

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3 Claims. (Cl. 112-260)

The invention relates to a device for fastening the stitch plate on the lower part of a high speed sewing machine.

Owing to the high number of stitches in the modern high speed sewing machines there is a substantially increased occurring of fluff as compared with sewing machines operating at numbers of stitches hitherto usual, caused by the feed dog and the thread-guiding members, particularly when the machine is provided with a cutting off device. Therefore, it has become necessary to remove the stitch plate frequently, for instance twice a day at least, in order to clean all the sewing implements and the space in which the stitches are produced.

The well known methods of fastening stitch plates on the lower part of inappropriate. Usually the stitch plates are fastened by means of two countersunk screws. This method of fastening has several disadvantages. For loosening and tightening the fastening screws a screw driver is required, moreover, the thread and the screw head slot will early be ruined owing to a frequent unscrewing and a careless inserting of the screws so that the screw heads will not any more fit in the countersunk bores of the stitch plate, and thus the sewing material will be damaged during the sewing. Moreover, the small screws may disappear easily because of their small size. Therefore, this work taking up a great deal of time and the fastening of the stitch plate must often be carried out by mechanics skilled in the art.

That is the reason why because of lack of time the stitch plates are not frequently enough removed for cleansing, so that the fluff settling down between the stitch plate and the feed dog is able to brake or to stop the sewing machine in operation, and even the fluff can be compacted so as to be able to effect the crack of the bridges of the stitch plate. The same comes true for all the other sewing implements.

It is the object of the invention to fasten the stitch plate so as to be quickly and easily removed by the seamstress herself.

Another object of the invention is to bring about a loosening and a fastening of the stitch plate without applying tools so that the screws and the thread cannot be damaged any more.

The device, according to the invention, consists in the stitch plate being chamfered at the two narrow sides and the rear edge to contact under a groove which is correspondingly undercut slantingly and provided in the lower part of the sewing machine, whereas its front edge is overlapped by a claw also correspondingly undercut slantingly and pressed against the stitch plate by a clamping means separably fixed at the lower part of the sewing machine. In this way the stitch plate is not only pressed into the groove at the rear end, but simultaneously clamped, too, on the lower part of the sewing machine, owing to its chamfered edges at either end.

A screw provided with a knurled head serves appropriately as a clamping means for the claw and is screwed

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in a tapped hole of the lower part of the sewing machine. The screw passes freely through a hole of the claw and bears against the external surface by means of a collar.

For loosening the stitch plate the screw with a knurled head must be untightened only slightly without using any tools. The screw cannot be lost as it must not be unscrewed. By the screw being arranged below the table top of the sewing machine the sewing material does not come into contact with it.

Owing to the claw being imbedded in a vertically running recess provided in a platelike projecting part with a screwed in screw with knurled head at the front side of the lower part of the sewing machine it is guided at either side. At its lower end the claw has a shoulder on either side. The shoulders contact under the projecting part and thus prevent a displacing of the claw upward. With two eyes disposed on the inside of the claw it supports itself against the lower part of the sewing machine,

The construction according to the invention is by way of example illustrated on the accompanying drawing, in which:

Fig. 1 is a side view of a section of the lower part of the sewing machine with the stitch plate fixed on it, partially cut vertically,

Fig. 2 is a plan view on parts illustrated in Fig. 1,

Fig. 3 is a front view of the claw, and

Fig. 4 is a horizontal section through the claw and through a section of the lower part of the sewing machine.

The stitch plate 1 is of the usual, substantially rectangular design and provided with the necessary recesses. The front edge 3 of the stitch plate 1 turned to the operator side of the sewing machine and its opposite rear edge 2 are chamfered from the top to the bottom and outside, the rear edge 2 all over the width, the front edge 3 preferably over a part of the width only. At the rear end the stitch plate 1 contacts with its edge 2 under a correspondingly chamfered groove 4 of the lower part 5 of the sewing machine.

At the front end of the chamfered edge 3 disposed in a recess 16 of the stitch plate 1 is overlapped by a correspondingly chamfered edge of a claw 6 which extends downward and is pressed by a separable fixing means, for instance a screw 8 with a knurled head against the lower part 5 of the sewing machine. The screw 8 passes freely through a hole 17 of the claw 6 and is provided with a collar 9 or the like bearing against the outside of the claw 6.

By tightening the screw 8 with knurled head the rear edge 2 of the stitch plate 1 is forced into the groove 4 of the lower part 5, and simultaneously the two ends are pressed against the bearing surface 18 of the lower part 5 (Fig. 1). The stitch plate 1 is prevented from being laterally displaced by means of plugs 10 which are fixed in the lower part 5 and project over its bearing surface, and engage in slots 11 of the stitch plate 1, which are provided at the edges 2 and 3 right-angled to them.

The claw 6 is inserted in a vertically running recess 12 of a platelike projecting part 13 of the lower part 5 and thus guided on either side (Fig. 4). At its lower end the claw 6 has a shoulder 14 on either side. The shoulders 14 seize under the projecting part 13 and thus prevent a displacing of the claw 6 upward. With two eyes 15 disposed on the inside of the claw 6 it supports itself against the lower part of the sewing machine (Fig. 1).

What is claimed is:

1. In a high speed sewing machine an elongated stitch plate on the lower part of the sewing machine and having oppositely disposed chamfered edges and openings in two opposite ends, one of said ends being the operator's side and the opposite end being at the rear of the sewing machine, and both of said ends having edges chamfered from

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the top to the bottom, the said second-mentioned end with its chamfered edge being provided in a corresponding groove in the lower part of the sewing machine, a claw member for the first-mentioned end of the stitch plate to secure the first-mentioned end of the plate to the lower part of the sewing machine, said claw member having a hole therein and overlapping the chamfered section of the first-mentioned end of the stitch plate and being separately fixed to the lower part of the sewing machine, and a screw provided in the lower part of the sewing machine to secure the plate to the sewing machine, said screw freely passing through the hole in the claw and having a collar near its head bearing against the claw.

2. In a high speed sewing machine an elongated stitch plate on the lower part of the sewing machine and having oppositely disposed chamfered edges and openings in two opposite ends, one of said ends being the operator's side and the opposite end being at the rear of the sewing machine, and both of said ends having edges chamfered from the top to the bottom, the said second-mentioned end with its chamfered edge being provided in a corresponding groove in the lower part of the sewing machine, a claw member for the first-mentioned end of the stitch plate to secure the first-mentioned end of the plate to the lower part of the sewing machine, said claw member having an upper part overlapping the chamfered section of the first-mentioned end of the stitch plate and being separately fixed to the lower part of the sewing machine and said claw member having an intermediate part and a lower part, a platelike projecting part provided on the lower part of the sewing machine and on the operator's side, said platelike projecting part having a vertically extending recess with parallel edges wherein the intermediate part of the claw member is disposed, and the lower part of the claw member being provided with shoulders, one on either side, which contact under the platelike projecting part, and the claw member having a hole therein and two projecting eyes by means of which the claw supports itself at the lower part of the sewing machine, and screw means passing through the hole in

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the claw member and into the projecting part and in threaded engagement with the lower part of the sewing machine to secure the plate to the sewing machine.

3. In a high speed sewing machine an elongated stitch plate on the lower part of the sewing machine and having oppositely disposed chamfered edges and openings in two opposite ends, one of said ends being the operator's side and the opposite end being at the rear of the sewing machine, and both of said ends having edges chamfered from the top to the bottom, the said second-mentioned end with its chamfered edge being provided in a corresponding groove in the lower part of the sewing machine, a claw member for the first-mentioned end of the stitch plate to secure the first-mentioned end of the plate to the lower part of the sewing machine, said claw member overlapping the chamfered section of the first-mentioned end of the stitch plate and being separately fixed to the lower part of the sewing machine, a platelike projecting part provided on the lower part of the sewing machine and on the operator's side, said platelike projecting part having a vertically extending recess with parallel edges wherein the intermediate part of the claw member is disposed and the lower end of the claw member is provided with shoulders, one on either side, which contact under the platelike projecting part, and the claw member having a hole therein and two projecting eyes by means of which the claw supports itself at the lower part of the sewing machine, and a screw provided in the lower part of the sewing machine to secure the plate to the sewing machine, said screw freely passing through the hole in the claw and having a collar near its head bearing against the claw.

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