June 14, 1949. C. S. BARLOW 2,473,236

MEANS FOR HOT PRESSING MATERIALS ON SEWING MACHINES

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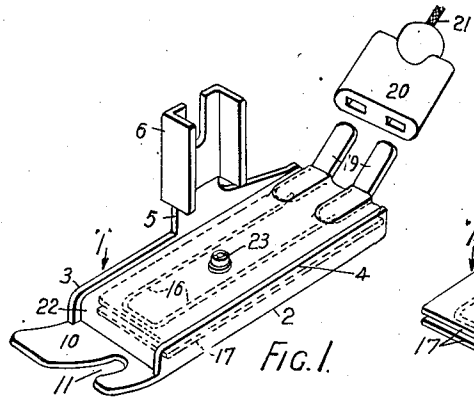

FIG. 1.

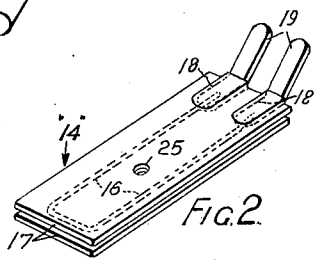

FIG. 2.

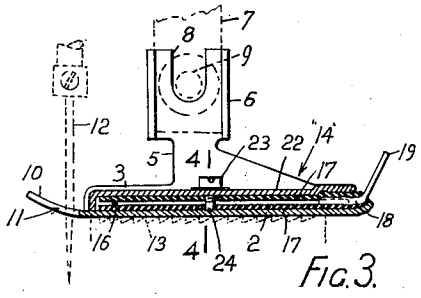

FIG. 3.

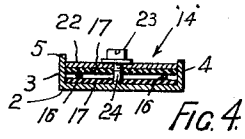

FIG. 4.

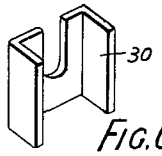

FIG. 6.

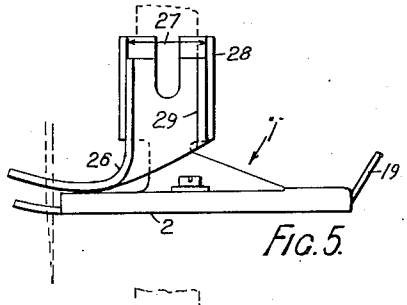

FIG. 5.

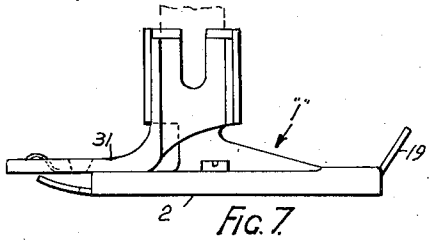

FIG. 7.

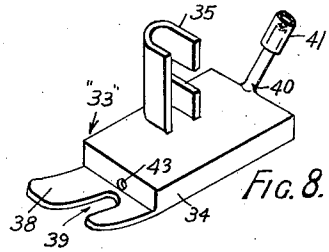

FIG. 8.

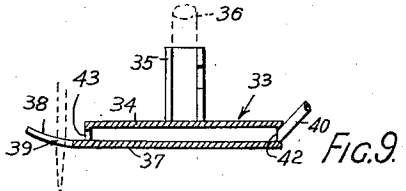

FIG. 9.

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INVENTOR

By [signature]
his ATTY.

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UNITED STATES PATENT OFFICE

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MEANS FOR HOT PRESSING MATERIALS ON SEWING MACHINES

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New South Wales, Australia

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2 Claims. (Cl. 219—19)

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This invention relates to means for permitting the hot pressing of materials while these are disposed on sewing machines and during the performance of sewing operations on the latter or not. The said means are adapted for use on sewing machines which are capable of being driven by the hand or foot of a person or by power drive devices.

The said means are characterised in that the presser bar of the said machines has attached thereto for said hot pressing a presser foot or other like sewing attachment hereinafter mentioned with which are associated heating means capable of providing heat for said hot pressing.

Said heating means may consist of a heating device with sole plate associated with the said foot or attachment for said hot pressing.

Such heating device may consist of electric heating means, or steam supply heating means, or hot air supply heating means.

In the case of the heating device consisting of electric heating means, an electric heating element may be disposed between upturned longitudinal edges of said foot or attachment and below a cover for said element and above a sole plate on said foot or attachment, the said sole plate being adapted for performance of said hot pressing when electric current is served to said element.

Similarly, in the case of the heating device consisting of either steam supply heating means or hot air supply heating means, the said foot or attachment has a hollow container for steam or hot air respectively to be supplied thereto also a sole plate adapted for performance of said hot pressing when steam or hot air is served to said container for the heating thereof.

Other features of the invention are hereinafter referred to.

So that the invention may be better understood and carried into effect the same by way of certain examples will now be more particularly described with reference to the accompanying drawings, in which—

Fig. 1 is a perspective view of a presser foot adapted to be fitted to a presser bar, the said foot having associated therewith electric heating means;

Fig. 2 is a similar view showing one form of construction of electric heating element;

Fig. 3 is a longitudinal sectional elevation of the presser foot shown in Fig. 1 with associated electric heating element shown in Fig. 2;

Fig. 4 is a cross-section on line 4—4, Fig. 3;

Fig. 5 is an elevational view showing one manner of attaching the electric heating means to another presser foot;

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Fig. 6 is a perspective view of a fitting showing manner in which a presser foot with electric heating element can be affixed to the presser bar when a known presser foot is removed;

Fig. 7 is a similar view to that of Fig. 5 showing the application of the invention to a hemmer foot;

Fig. 8 is a perspective view of a presser foot with associated hollow container for supply of either steam or hot air thereto to heat the sole plate for hot pressing purposes; and

Fig. 9 is a longitudinal sectional elevation of the means shown in Fig. 8.

With reference to the construction and arrangement of the said means as shown in Figs. 1 to 4, it will be seen therefrom that a presser foot 1 is provided. The presser foot 1 is shown with a sole plate 2 which has longitudinal upturned oppositely disposed side flanges 3 and 4. The flange 3 has an extension 5 whose upper end has a U-shaped lug 6 which is adapted to be secured to the presser bar 7 of a sewing machine when the presser foot 1 is to be assembled thereon (Fig. 3). Lug 6 has its usual slot 8 through which can pass the clamping screw 9 of the presser bar 7. One end 10 of the sole plate 2 is slightly curved upwardly and has a slot 11 for the needle 12 of the sewing machine to pass through. The sewing machine feeder 13 is disposed below the sole plate 2.

Upon the upper side of the sole plate 2 and positioned between the flanges 3 and 4 thereof there may be located an electrical heating element 14. The latter may consist of an electric conductive heating coil 16 situate between a pair of electric insulator mica or other suitable plates 17, the opposite ends of the coil 16 being secured to separate lugs 18. The lugs 18 respectively may have a tongue piece 19 which may serve as plug connectors for attachment thereto of an electric plug 20 which can be connected to an electric service flex lead 21.

The heating element 14 may be secured to the sole plate 2 by a cover plate 22 which is adapted to fit snugly between the flanges 3 and 4 of the presser foot 1. Plate 22 may be so secured in position by a clamping nut 23 co-operating with a screw-threaded stem 24 one end of which is attached to the sole plate 2. There is a through opening 25 in the heating element 14 and a registering through opening in the cover plate 22 through which the free end of the stem 24 can project.

By permitting electric current to pass to the

heating coil 16 the sole plate 2 will thereby be heated and materials on the sewing machine can thus be hot pressed. The heating of the sole plate 2 may be regulated as desired.

In the construction and arrangement of the means as shown in Fig. 5, the presser foot 1 with embodied heating element before described is adapted to be fitted to any well known presser foot 26 without it being necessary to remove the latter from its presser bar 7. In such case, however, the bight 27 of the U-shaped lug 28 of the presser foot 1 is made wider to permit it to overlie the lug 29 of the presser foot 26, so that the presser foot 1 will be disposed beneath the presser foot 26 when both of them are assembled.

Should it be desired, however, that the presser foot 1 with the said enlarged bight 27 (Fig. 5) be used with the known presser foot 26 removed, then the fitment 30 shown in Fig. 6 may be employed.

Regarding Fig. 7, there is shown therein a construction and arrangement of the said means wherein a hemmer foot 31 is combined with the presser foot 1, the latter having the heating element means before described embodied therewith. The hemmer foot 31 is disposed above the presser foot 1.

In the before described means heating of the hot pressing means is effected through an electric heating element, but with reference to the construction and arrangement of the hot pressing means shown in Figs. 8 and 9, a presser foot 33 is shown therein adapted to be heated by a supply of steam or hot air. In such case, the presser foot 33 may consist of an enclosed rectangular or other suitable shaped hollow container 34 which has a U-shaped lug 35 adapted to be secured to the presser bar 36 of a sewing machine. The bottom wall of the container 34 has an extension 38 with upturned end having a slot 39 for the needle of the sewing machine to pass through. There may be a pipe 40 secured to and open to the container 34 the pipe 40 being adapted to be connected to a source of supply of steam or hot air through a flexible pipe 41 associable with the outer end of the pipe 40. Supply of said steam or hot air through the pipe 41 may be regulated by manipulatable valve or other suitable means. Oppositely disposed to the inlet opening 42 of the pipe 40 to the container 34 is an exhaust port 43 to permit discharge of steam or hot air from the container 34 after the admittance of same thereto for heating purposes of said container.

It will be understood that the hot pressing means above described instead of being used as a separate presser foot or in association with a presser foot or as a separate hemmer foot or in association with a hemmer foot, may be used as or with a binder or with a braider foot or other like sewing attachment fitting the presser bar of a sewing machine.

Transformer means may be associated with the means for supplying electric current to the electric heating element of the said hot pressing means.

What I claim as my invention and desire to secure by Letters Patent is:

1. A device for the hot pressing of material on a sewing machine provided with a presser bar and sewing needle, said device comprising: a presser foot having a sole plate formed with longitudinal, oppositely-disposed, upturned side flanges, and with one of its ends curved upwardly to a slight extent, said upwardly curved end having a slot formed therein for the passage of said sewing needle therethrough; an extension formed on one of side flanges, said extension being formed, at its upper end, as a U-shaped lug provided with a slot formed therein, said U-shaped lug being adapted to be secured to said presser bar by a clamping screw which is adapted to pass through said slot in said U-shaped lug; an electric heating element disposed between said upturned side flanges of said sole plate of said presser foot, said electric heating element being adapted to heat said presser foot when electrical current is flowing therethrough; and a cover for said electric heating element, said cover being disposed above said electric heating element and between said upturned side flanges of said sole plate.

2. The device for the hot pressing of material on a sewing machine as defined in claim 1, wherein a screw-threaded stem extends upwardly from the upper surface of said sole plate, and said electric heating element and said cover are apertured to permit passage of said screw-threaded stem therethrough, said device including a clamping nut which is screw-threadedly engaged on said stem above said cover, whereby said electric heating element and said cover may be securely held in relation to said sole plate, thereby providing a compact unitary assembly.

CLIFFORD STANLEY BARLOW.

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