Feb. 8, 1966 A. KALISH 3,233,572

SLIP-ON SHOE FOR A SEWING MACHINE FOOT

Filed Feb. 26, 1965

Fig. 1

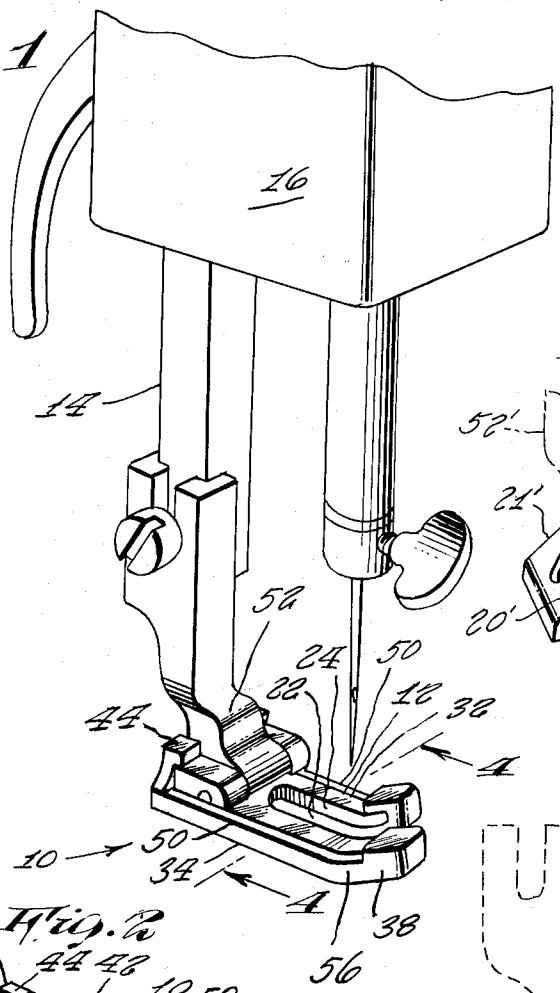


Fig. 6

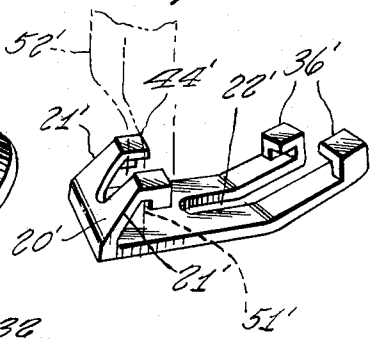


Fig. 2

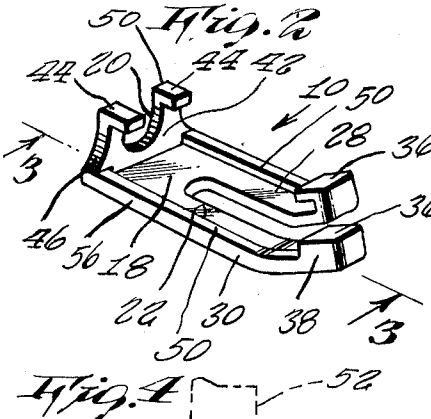


Fig. 3

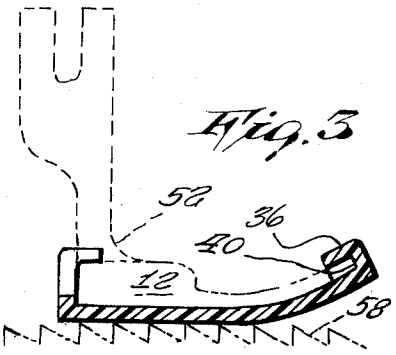
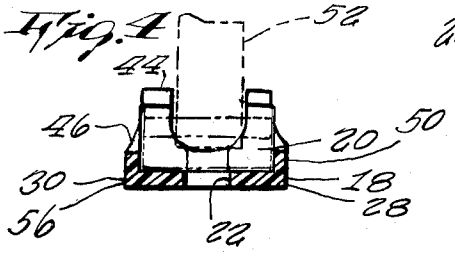


Fig. 4



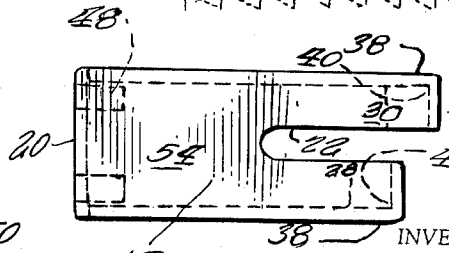


Fig. 5

INVENTOR.
ARTHUR KALISH
BY
Jacob L. Kollin
ATTORNEY

United States Patent Office 3,233,572 Patented Feb. 8, 1966

3,233,572

SLIP-ON SHOE FOR A SEWING MACHINE FOOT

Arthur Kalish, 949 43rd St., Brooklyn 19, N.Y.

Filed Feb. 26, 1965, Ser. No. 435,616
4 Claims. (Cl. 112—235)

This invention relates to a replaceable Teflon shoe for the pressure foot of a sewing machine or the like.

It is generally well known to those skilled in the art that in the manufacture of sewn products the sewing machine operators find rapid production difficult when laminated materials with high frictional surfaces are passed under the needle. Materials such as rubber elastic tape and fabric sheets containing rubber threads such as corset panels have high frictional surface which are frictionally held back when passing beneath a sewing machine pressure foot. Such foot is generally made of steel which is highly polished on its underside so as to reduce friction. Nevertheless the friction is still evident on conventional sewing machines employing the same, and the fabrics being sewn are arrested in their forward movement between the feed dog and the underside of the pressure foot.

Heretofore various friction reducing devices have been tried in an attempt to solve the problem; such as placement of ball bearings or rollers into the bottom of the foot. However their success was questionable and they have not been adopted in the trade.

Accordingly it is a principal object of the present invention to provide a shoe to fit over the underside of any existing foot, the shoe having highly anti-frictional properties.

Another object is to provide a pressure foot shoe having a lower sole surface made of Teflon which is a trade name for a material comprising tetrafluoroethylene polymer.

Still another object is to provide a Teflon shoe that can be readily fitted over the foot during installation and which does not require any screws or other attaching accessories for securement.

Another further object is to provide a shoe made of a one piece material which is sufficiently pliable to snap over the bottom of the foot.

Still another object of the invention is to provide such a shoe which can be readily used by a housewife on a household sewing machine for sewing laminated fabric.

Yet another object of the invention is to provide such a replaceable shoe which is very inexpensive and can be discarded without any substantial economic loss.

Other objects are to provide a pressure foot shoe which is simple in design, easy to manufacture, rugged in construction, easy to use and efficient in operation.

These and other objects will be readily apparent upon a study of the following specification and the accompanying drawing wherein:

FIG. 1 is a fragmentary perspective view of a sewing machine showing the invention incorporated therewith;

FIG. 2 is a perspective view of the shoe shown per se;

FIG. 3 is a cross-section on line 3—3 of FIG. 2;

FIG. 4 is a cross-sectional view through line 4—4 of FIG. 1;

FIG. 5 is a bottom plan view of the foot; and

FIG. 6 is a modified form of the shoe.

Referring now to the drawing in detail, the numeral 10 represents a pressure foot shoe according to the present invention which is secured over a conventional foot 12 at the lower end of a pressure foot bar 14 which extends downwardly from a sewing machine head arm 16.

The shoe comprises a one-piece member made from Teflon, a tetrafluoroethylene polymer material. It includes a longitudinal bottom panel 18 and a vertical rear panel 20. The bottom panel has a longitudinal slot 22 therethrough which is in alignment with slot 24 in the foot 12; the slot 22 thus bifurcating the forward end of the panel to form toe pieces 28 and 30 one of which is shorter than another in a similar manner as the toe pieces 32 and 34 of the foot. In a similar manner to the toe pieces on the foot 12, the toe pieces 28 and 30 are upwardly inclined, and the terminal ends thereof are bent over the top (as shown at 36) and around the outer sides (as shown at 38) of the toe pieces on foot 12, thus forming pockets 40. The pockets 40 provide hooking means for securing the forward end of the shoe upon the foot.

The rear panel has a pair of upward extensions 42, each of which has at its upper end a horizontally forward projection 44. The projections 44 serve to clip over the rear part of the foot 12 thereby securing the rear of the shoe thereupon. The vertical portion 52 of the foot 12 is positioned between the projections 44.

An upstanding flange 50 is formed along the side edges 56 of the bottom panel 18 so to further laterally secure the shoe around the foot.

In operative use the shoe is simply snapped upon the underside of the foot and the sewing operation is then performed in a conventional manner. The fabric being sewn is fed into the sewing machine between the underside 54 of the shoe and the feed dog 58.

The shoe is readily replaceable should it become worn.

While various changes may be made in the detail construction it is understood that such changes will be in the spirit and scope of the present invention as is defined in the appended claims.

For example, as illustrated in FIG. 6, a rear panel 20' which is inclined away from the back of a foot 51' may be provided with inclined edges 21' to permit the fitting of the shoe to feet of different sizes.

I claim:

1. In a slip-on shoe of one-piece tetrafluoroethylene polymer construction for a sewing machine foot, the combination of a longitudinal bottom panel and a back panel, said back panel being perpendicular to said bottom panel, said back panel having a bottom edge adjacent a rear end edge of said bottom panel, an opening within said bottom panel for allowing clearance for a vertically movable sewing needle, hooking means at the forward end of said bottom panel for securement of the same to the forward end of a sewing machine foot and clamping means on said back panel for securement of the rear end of said shoe to the rear end of a sewing machine foot, said opening comprising a slot communicating with the forward edge of said bottom panel to form a pair of bifurcated toe pieces, each of said toe pieces being upwardly diagonally inclined and including said hooking means which comprises a pocket on each toe piece formed by an upward and rearward extension at a terminal end and a wall on an outer side.

2. In a slip-on shoe of one-piece tetrafluoroethylene polymer comstruction for a sewing machine foot, the combination of a longitudinal bottom panel and a back panel, said back panel being perpendicular to said bottom panel, said back panel having a bottom edge adjacent a rear end edge of said bottom panel, an opening within said bottom panel for allowing clearance for a vertically movable sewing needle, hooking means at the forward end of said bottom panel for securement of the same to the forward end of a sewing machine foot and clamping means on said back panel for securement of the rear end of said shoe to the rear end of a sewing foot, said opening comprising a slot communicating with the forward edge of said bottom panel to form a pair of bifurcated toe pieces, each of said toe pieces being upwardly diagonally inclined and including said hooking means which comprises a pocket on each toe piece formed by an upward

and rearward extension at a terminal end and a wall on an outer side, said clamping means comprising a pair of upward extensions on said rear wall and each of said extensions having a forward projection at the upper end thereof for clipping over a rear portion of said foot.

3. In a slip-on shoe of one-piece tetrafluoroethylene polymer construction for a sewing machine foot, the combination of a longitudinal bottom panel and a back panel, said back panel being perpendicular to said bottom panel, said back panel having a bottom edge adjacent a rear end edge of said bottom panel, an opening within said bottom panel for allowing clearance for a vertically movable sewing needle, hooking means at the forward end of said bottom panel for securement of the same to the forward end of a sewing machine foot and clamping means on said back panel for securement of the rear end of said shoe to the rear end of a sewing machine foot, said opening comprising a slot communicating with the forward edge of said bottom panel to form a pair of bifurcated toe pieces, each of said toe pieces being upwardly diagonally inclined and including said hooking means which comprises a pocket on each toe piece formed by an upward and rearward extension at a terminal end and a wall on an outer side, said clamping means comprising a pair of upward extensions on said rear wall and each of said extensions having a forward projection at the upper end thereof for clipping over a rear portion of said foot, said bottom panel having an upstanding flange along the side edges for receiving said foot therebetween.

4. In a slip-on shoe of one-piece tetrafluoroethylene polymer construction for a sewing machine foot, the combination of a longitudinal bottom panel and a back panel, said back panel being perpendicular to said bottom panel, said back panel having a bottom edge adjacent a rear end edge of said bottom panel, an opening within said bottom panel for allowing clearance for a vertically movable sewing needle, hooking means at the forward end of said bottom panel for securement of the same to the forward end of a sewing machine foot and clamping means on said back panel for securement of the rear end of said shoe to the rear end of a sewing machine foot, said opening comprising a slot communicating with the forward edge of said bottom panel to form a pair of bifurcated toe pieces, each of said toe pieces being upwardly diagonally inclined and including said hooking means which comprises a pocket on each toe piece formed by an upward and rearward extension at a terminal end and a wall on an outer side, said clamping means comprising a pair of upward extensions on said rear wall and each of said extensions having a forward projection at the upper end thereof for clipping over a rear portion of said foot, said bottom panel having an upstanding flange along the side edges for receiving said foot therebetween, said upward extensions on said rear wall being diagonally extended from the rear end of said shoe to permit the shoe to slip onto any of a plurality of sewing machine feet of varying lengths.

References Cited by the Examiner

UNITED STATES PATENTS

770,008	9/1904	Holderman	112—151
1,729,117	9/1929	Merritt	112—235
1,933,032	10/1933	Rubel	112—235
1,934,190	11/1933	Harker	112—235
2,991,739	7/1961	Joa	112—235

JORDAN FRANKLIN, *Primary Examiner.*

P. D. LAWSON, *Assistant Examiner.*