

Feb. 6, 1962

S. FICHERA

3,019,751

FINGER SHIELD AND EYE GUARD FOR SEWING MACHINES

Filed Oct. 14, 1959

FIG. 1

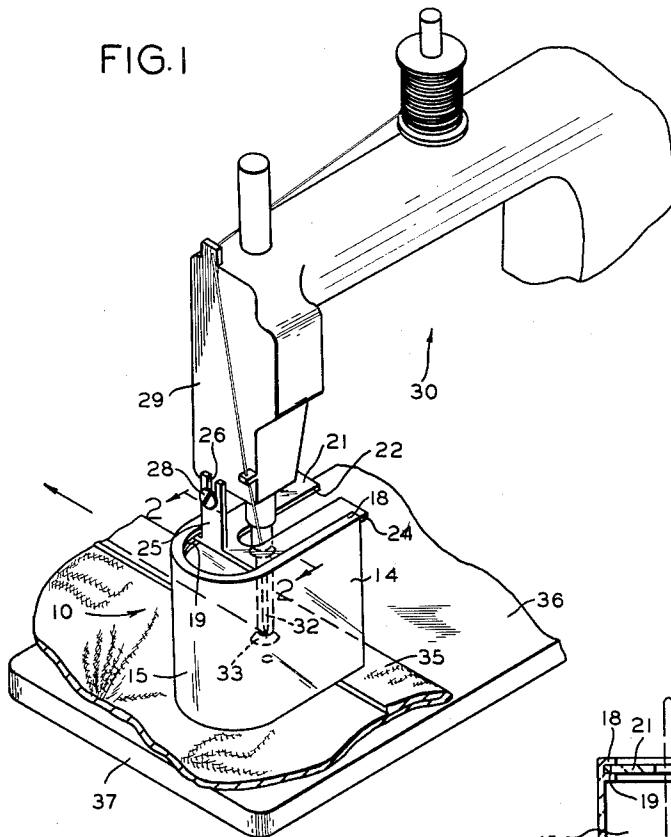


FIG. 2

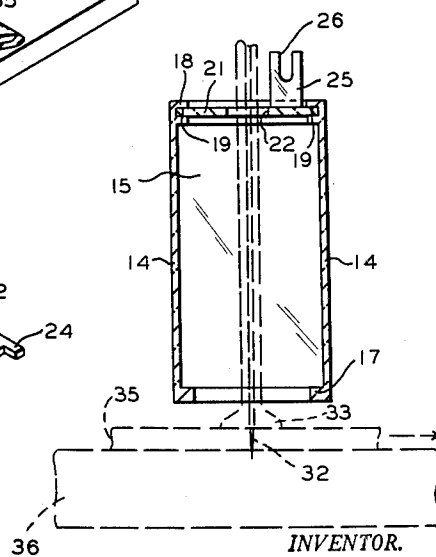
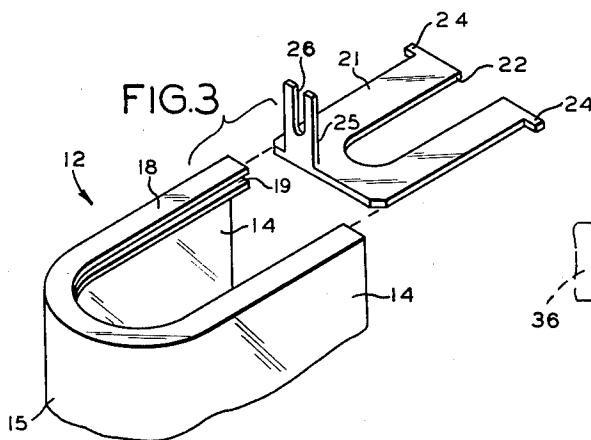


FIG. 3



INVENTOR.
SALVATORE FICHERA

BY *Jacob Trachtman*
ATTORNEY

1

3,019,751

FINGER SHIELD AND EYE GUARD FOR SEWING MACHINES

Salvatore Fichera, 807 Carpenter St., Philadelphia, Pa.

Filed Oct. 14, 1959, Ser. No. 846,351

3 Claims. (Cl. 112--261)

This invention relates to sewing machines and, more particularly, to an accessory therefor.

In the use of hopper-baster type sewing machines, the rapidly oscillating machine needle represents a constant danger to the operator. Thus, in close or fast work, there is a tendency for the operator to move his or her fingers into close proximity with the needle parts, thereby risking the possibility of having a finger pierced by the fast moving needle. Furthermore, the fast moving needle may also strike a button or some other hard object during the sewing operation, and thus suddenly break, whereby the severed piece may be driven toward the operator at a relatively great force, and presenting still another hazard. While various types of shields and guards have been provided for use with sewing machines, such have either been inconvenient to use, interfere with the visibility of the operator, interfere with the movement of the workpiece through the needle parts of the machine, or the like. It is therefore an object of the present invention to provide a combination finger shield and eye guard for sewing machines that is extremely simple in construction, efficient in operation, and which will overcome the aforementioned difficulties.

Another object of the present invention is to provide a safety device for hopper-baster sewing machines, which can be readily mounted upon and removed from the machine as may be required, and which effectively prevents injury to the fingers and eyes of the operator.

Still an additional object of the present invention is to provide a safety device for sewing machines of the type described which can be readily detached from the sewing machine, when not in use, provides full visibility at all times, and which will not interfere with the working parts of the machine or the movement of the workpiece therethrough.

A more specific object of the present invention is to provide a combined finger shield and eye guard for hopper-baster type sewing machines which at least partly envelopes the needle parts of the machine therewith so as to effectively block movement of the fingers of the operators into association with the needle parts, and which is transparent so as to provide constant visual observation of the sewing operation at all times.

All of the foregoing and still further objects and advantages of this invention will become apparent from a study of the following specification, taken with the accompanying drawing wherein:

FIGURE 1 is a perspective view of a safety device made in accordance with the present invention in actual use;

FIGURE 2 is an enlarged transverse cross sectional view taken along line 2--2 of FIGURE 1, with the workpiece and sewing machine parts shown in phantom lines;

FIGURE 3 is an enlarged fragmentary exploded perspective view of the main parts of the safety device made in accordance with the present invention removed from the sewing machine.

Referring now more in detail to the drawing, a combined finger shield and eye guard 10 for sewing machines, made in accordance with the present invention, is shown to include a main body member 12 of generally U-shaped cross sectional configuration. At least the central bight portion 15 which connects one end of the spaced apart parallel sides 14 of the U-shaped member together, is

2

constructed of transparent material, in order to provide the operator with a constant view of the sewing operation. The lowermost edges of the sides 14 and central bight portion 15 of the U-shaped main body member 12 is provided with an inwardly projecting bead 17 which reinforces the main body member and maintains the shape thereof. The uppermost edges of the sides 14 and bight portion 15 are also provided with a rigidifying inwardly projecting bead 18 which serves a similar purpose.

The upper reinforcing bead 18 of the main body member 12 defines a channel shaped groove 19 that slidably receives the side edges of a rigid mounting plate 21. This mounting plate 21 is provided with a central longitudinal slot 22 that opens outwardly toward one end of the mounting plate 21 in a direction away from the bight portion 15 of the main body member 12. This end of the mounting plate 21 is also provided with a pair of laterally outwardly extending lugs 24 which serve as stops to limit the inward movement of the mounting plate 21 toward the bight portion 15 of the main body member 12. An upstanding tab 25 is integral with the end of the mounting plate 21 opposite the open end of the slot 22. This tab 25 is also provided with an upwardly opening slot 26 which slidably receives a mounting screw 28 therewithin that is carried by the head 29 of the sewing machine. It will thus be recognized that the laterally spaced apart sides of the mounting plate 21 and the channel shaped groove 19 of the main body member 12 provide assembly means for detachably connecting the main body member to the tab 25 that serves as a bracket for securing the parts to the head 29 of the sewing machine.

The mounting screw 28 of the sewing machine head is placed in a location which will allow the U-shaped slot 22 to receive the needle 32 and needle guide 33 in the manner shown in FIGURES 1 and 2. The height of the main body member 12 with respect to the table 36 of the sewing machine may be adjusted by loosening and tightening the mounting screw 28 at any position along the length of the vertical slot 26 of the mounting bracket tab 25. Thus, the main body member 12 may be moved closer to the table 36 during the sewing of thinner material and raised during the sewing of thicker material simply by adjusting the mounting screw 28 and the vertical position of the assembly with respect to the sewing machine head 29.

With the parts in the proper operating position as shown in the drawing, the pointed needle 32 and any of the other needle parts, such as the guide 33, are substantially completely enveloped within the U-shaped main body member 12. The bight 15 of the main body member 12 thus provides a light transmitting shield which is in intersecting relationship with the line of sight between the workpiece 35 and the machine operator when working in a position in alignment with the longitudinal plane of the machine and facing the end 37 of the work table, as is customary with the operation of a baster machine. The sides 14 of the main body member thus face into the path of movement of the workpiece toward the needle parts of the machine and block the movement of the fingers of the machine operator toward engagement with the needle parts.

While the present invention has been illustrated for use with a baster type machine, it will be recognized by those skilled in the art that such may be adapted for other types of sewing machines. It will also be recognized that while this device is preferably entirely constructed from molded transparent plastic material, any other suitable material may be used for this purpose.

While this invention has been described with particular reference to the construction shown in the drawing, it is to be understood that such is not to be construed as

imparting limitations upon the invention, which is best defined by the claims appended hereto.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A finger shield and eye guard for sewing machines comprising, in combination, an arcuate main body member having a light transmitting portion and a substantially rigid portion defining a pocket at least partially enveloping the needle parts of a sewing machine therewithin, said main body being of U-shaped cross section having a pair of spaced apart sides and a central bight portion, said bight portion being transparent and defining said light transmitting portion, said sides being rigid and defining said rigid portion of said main body member, mounting means comprising a substantially rigid plate for detachably securing said main body member adjacent to said needle parts of the sewing machine with the light transmitting parts in the line of sight between the needle parts and the machine operator and with said rigid portion in the path of movement of the fingers of the machine operator and the workpiece toward the needle parts, said mounting means including a bracket for releasable connection to the sewing machine, and track assembly means slidably connecting said main body member to said bracket comprising a longitudinal channel defined by

said sides of said main body member extending normal to said bight portion slidably receiving said rigid plate therewithin.

2. A finger shield and eye guard for sewing machines as set forth in claim 1, wherein said rigid plate defines a central slot opening outwardly in a direction away from said bight portion and extending parallel to said sides, said slot receiving the needle parts of the sewing machine therewithin.

3. A finger shield and eye guard for sewing machines as set forth in claim 2, wherein said bracket comprises an upstanding tab extending substantially normal to said rigid plate, said tab having a slot adjustably receiving a mounting screw carried by the sewing machine therewithin.

References Cited in the file of this patent

UNITED STATES PATENTS

1,000,740	Mashbir	Aug. 15, 1911
2,338,331	Imberman	Jan. 4, 1944
2,469,531	Toth et al.	May 10, 1949
2,570,705	Pelletier	Oct. 9, 1951

FOREIGN PATENTS

32,264	Denmark	Sept. 10, 1923
--------	---------	----------------