

T. G. PLANT.
SOLE SEWING MACHINE.

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940,055.

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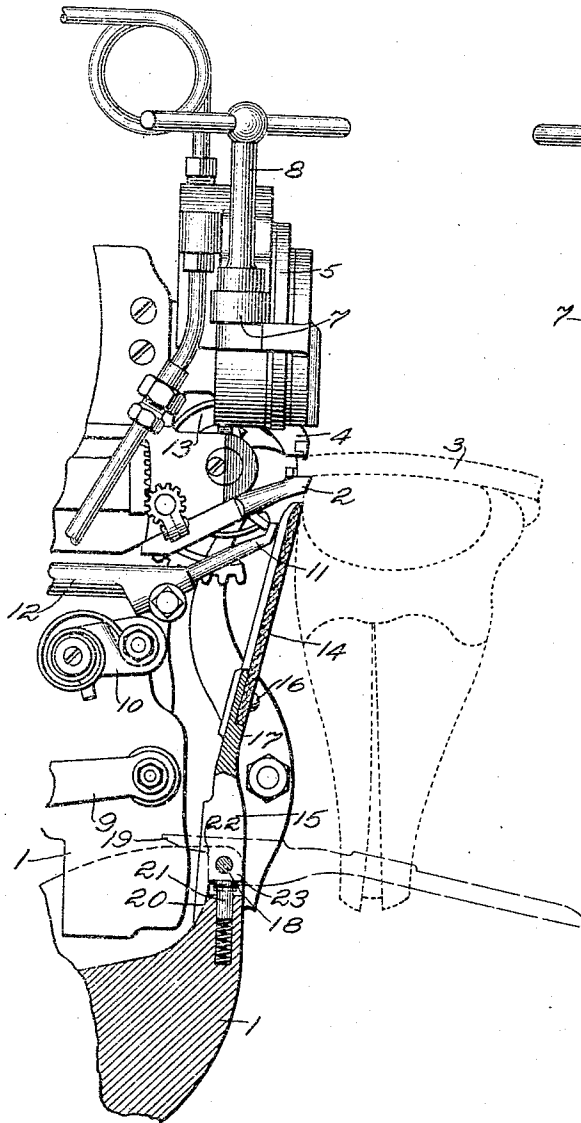


Fig. 1.

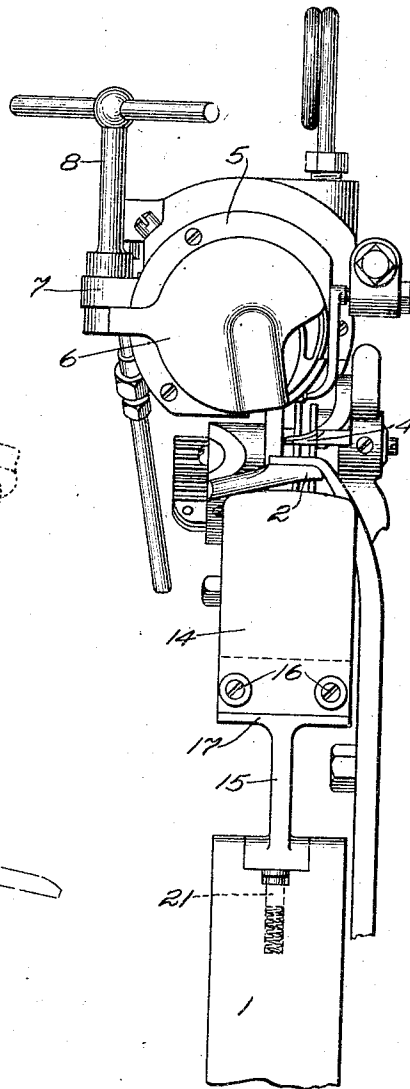


Fig. 2.

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UNITED STATES PATENT OFFICE.

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SOLE-SEWING MACHINE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THOMAS G. PLANT, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Sole-Sewing Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

The invention to be hereinafter described relates to sole sewing machines and more particularly to means for protecting the work from injurious contact by the operating parts of the machine during the sewing operation.

As well known by those skilled in the art, sole sewing machines are provided with a work support on which the material to be sewed is placed, a curved needle which passes through the work and engages the sewing thread at the opposite side thereof, and a looper which is operated to carry a loop of thread about the needle after it has passed through and while still in the work. The needle usually passes through the work from the side thereof opposite the looper, and the latter in moving around the needle to place the thread in the needle hook, or place the thread upon the needle, is liable to injuriously contact with the work.

With these considerations in view, the object of the present invention is to provide means whereby, in a sole sewing machine, the work is protected from injurious contact by the moving parts of the machine, especially the looper, during the sewing operation.

The invention will best be understood from the following description taken in connection with the accompanying drawings, which show one form or embodiment of the invention which is more definitely defined as to its scope by the claims.

Figure 1 is a partial side elevation of sufficient portions of a sole sewing machine to disclose the relation of the present invention thereto, certain parts being broken away and others being shown in section; and Fig. 2 is a front elevation showing sufficient portions of the sole sewing machine to make clear the relation of the invention thereto.

In the drawings, the frame 1 may be of any usual or desired construction suitable for supporting the operating parts of the machine, and these also may be of any usual

or particular type. Mounted upon the machine frame 1 is a table 2 which constitutes the work support upon which the work 3 rests during the sewing operation. Disposed above the table 2 is the presser foot 4 which may be of any usual or desired type and operating in the usual manner, as well understood by those skilled in the art. Also suitably mounted upon the machine frame is the shuttle box 5 containing the usual shuttle and having a door 6 mounted to swing about a fulcrum 7 to permit the shuttle to be replaced by another when desired. The handle 8 is employed for locking the door of the shuttle box in position. Also mounted on the machine frame 1 is the main take-up arm 9 and the auxiliary take-up 10, said parts being of usual form and construction and, forming no part of the present invention, need no further description.

Disposed below the table or work support 2 is the looper 11 carried by the actuating arm 12 which is itself operated in the usual manner to give to the looper a substantially circular motion about the needle 13 when the latter has penetrated and passed through the work to a position below the table 2.

From the construction above generally outlined and which is usual in this class of machines and well understood by those skilled in the art, it will be noted that the looper 11 during its substantially circular motion about the needle is liable to contact with the upper of a shoe, as indicated by dotted lines in Fig. 1. Especially is this liable to happen, in passing around certain portions of the sole, when the shoe upper is carried somewhat to the left, in Fig. 1, or turned about the work support or table 2 in order that the line of stitches may take the desired position with reference to the in-seam which secures the upper to the insole.

In order to protect the work from injurious contact by the looper, the present invention contemplates a guard 14 disposed in front of the looper and preferably somewhat below the table or work support 2, the position of the guard being such that during the operation of the machine, it is interposed between the looper 11 and the work or upper of a shoe being treated. This guard 14 is preferably made of flexible material, such as leather or the like, so that when the looper contacts therewith, said looper

will not be injured, the flexible guard yielding under such contact, as will be well understood.

The guard 14 is carried by a guard support 15, being secured thereto by means of screws or rivets 16, the edge of the guard 14 resting upon a shoulder 17 formed on the guard support.

The guard support 15 is pivotally mounted on the machine frame 1 at 18, Fig. 1, and has a tail piece 19 which, when the guard and guard support are raised into operative position as shown by full lines in Fig. 1, contacts with the frame 1 at 20 which constitutes a stop. In order to maintain the guard and guard plate in either operative or inoperative position, as desired, there is mounted in a suitable recess formed in the machine frame a spring pressed plunger 21 which acts upon the shoulders 22, 23, respectively, when the guard support is placed in operative or inoperative position, as indicated.

While it is desirable that the flexible guard 14 shall be interposed between the looper and the work during the sewing operation, it is equally desirable at times that the looper and adjacent mechanism disposed back of the guard 14 be readily accessible, as well understood by those familiar with this class of machines, and the hinged mounting of the guard support provides means whereby the guard may be readily turned into operative or inoperative position and held in either of said positions without further attention on the part of the operative.

What is claimed is:—

1. In a sole-sewing machine, the combination of the work support, the needle and looper, means for moving the looper about the needle, a guard support mounted on the machine frame to be moved into and out of operative position, and a guard sustained by said support to protect the work from con-

tact by the looper as the latter moves about the needle during the operation of the machine.

2. In a sole-sewing machine, the combination of the work support, the needle and looper, means for moving the looper about the needle, a guard support mounted upon the machine frame to move it into and out of operative position and a flexible guard mounted upon the said support and disposed in front of the looper to protect the work supported on the work support from contact by the looper as the latter carries the thread about the needle.

3. In a sole-sewing machine, the combination of the work support, the needle and looper, means for moving the looper about the needle, a guard, a guard support mounted upon the machine frame to swing the guard into and out of operative position in front of the looper to protect the work supported on the work support from contact by the looper as the latter carries the thread about the needle, and means for holding the guard in either operative or inoperative position.

4. In a sole-sewing machine, the combination of the work support, the needle and looper, a flexible guard disposed below the work support in front of the looper, a guard support hinged to the machine frame and carrying said guard, a spring for holding the guard support and guard in either operative or inoperative position, and a stop to limit the movement of the guard support and guard in one direction.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

THOMAS G. PLANT.

Witnesses:

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