

G. S. HERFURTH.
PRESSER FOOT ATTACHMENT FOR SEWING MACHINES.
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991,986.

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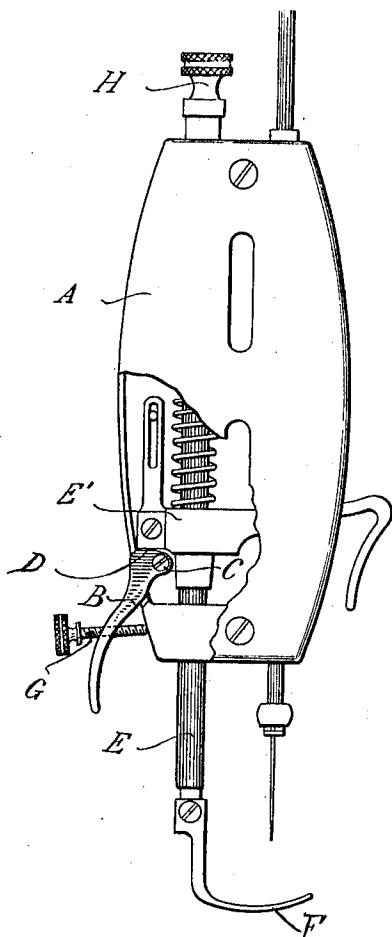


Fig. 1

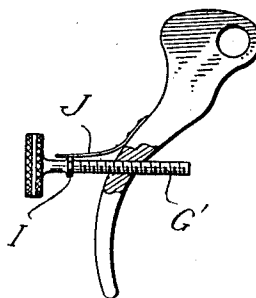


Fig. 2

WITNESSES:

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GEORGE S. HERFURTH, OF WASHINGTON, DISTRICT OF COLUMBIA.

PRESSER-FOOT ATTACHMENT FOR SEWING-MACHINES.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE S. HERFURTH, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Presser-Foot Attachments for Sewing-Machines, of which the following is a specification.

The present invention comprises a novel attachment designed to be applied to the cam lever ordinarily provided on certain types of sewing machines for quickly raising and lowering the presser foot of the machine with respect to the goods ordinarily engaged thereby. The attachment affords an auxiliary means for controlling the adjustment of the presser foot and one which is adapted to be rendered inoperative or operative with respect to the cam lever by reason of the arrangement of the latter upon the head of the machine.

In the operation of sewing machines much difficulty is experienced by the lack of conveniently operable means for adjusting the pressure of the presser foot, when goods of different thicknesses, or the like, are being stitched. For instance, when the operator finds it necessary to stitch goods somewhat thicker than those previously sewed, it is desirable that the tension or pressure exerted by the presser foot against the goods should be slightly relieved, at the same time being sufficient to secure proper feeding of the goods by the feed plate. The above control of the pressure of the presser foot is obtained by the present invention. Again, when stitching together goods having unusually smooth surfaces, such for instance, as velvet, or goods having a rough surface, as when stitching lining on goods having a smooth surface, it is usual that the feed plate causes the material at the bottom to feed faster than that being stitched thereto which is retarded by the tension of the presser foot. Still another purpose is subserved by the attachment; namely, when attaching linings or stiffening means to materials, it is found necessary to run the lines of stitching back and forth in a zig-zag manner, and to accomplish this, the operator sometimes holds the lifter lever slightly raised to partially relieve the tension on the goods. This latter operation prevents the use of both hands of the operator in manipulating the goods, and furthermore, an accurate or positive adjustment by manual efforts is impossible.

For a full comprehension of the advantages and construction of this invention, reference is to be had to the accompanying drawings, in which—

Figure 1 is an end view of a sewing machine head with the end plate partly broken away, showing the attachment applied to the lifter lever; and Fig. 2 is a modification of the invention.

Referring more particularly to the drawings, A is the end plate of the supporting head of a sewing machine.

B is a lifter lever pivoted at C, having the usual cam D thereon adapted to engage the guide bracket E' on the foot bar E, whereby the latter is raised when it is desired to remove goods from beneath the presser foot F of the machine. The lifter lever B has a threaded opening therein in which is adapted to be screwed the adjusting screw G, by which auxiliary means the desired adjustment of the tension of the presser foot is accomplished, when the said lifter lever is lowered for operation, the adjusting screw engaging with the supporting head of the machine.

It will be readily apparent that when it is desired to stitch goods thicker than the ordinary materials for which the machine is positively adjusted by the tap H, on the foot bar E, it is only necessary, after lowering the lifter lever, to turn the adjusting screw, thereby raising the presser foot to any desirable adjustment with respect to the feed plate of the machine. In this manner, the tension is increased or diminished by screwing the adjusting screw out or in, as need be, allowing the free use of both hands of the operator for moving the goods in any desirable direction under the presser foot.

It will be observed that the lifter lever B which is an ordinary cam lever coacting with the bracket E', extends through a slot in a side of the head A and the lower end of the slot limits the downward movement of the lifter lever. The arrangement of the screw G upon the lifter lever, and the mounting of the latter upon the head A are especially advantageous in that the screw G may be rendered inoperative to afford auxiliary adjusting means for the presser foot at the will of the operator. In other words, if it is desired that the presser foot F be used in the customary way, the particular work not requiring the auxiliary adjustment afforded by the screw G, the latter may be turned so as

to unscrew with respect to the lever B until the innermost end of the screw is clear of the head A when the lever B is moved downwardly to engage the lower end of the slot of the head A through which it passes. Furthermore, by reason of the mounting of the screw G upon the lever B, when the latter is thrown upwardly the screw G will be carried upwardly with the lever B and supported by the lever in an inoperative position.

In the modified form illustrated in Fig. 2, the adjusting screw G' is provided with a hexagonal or many sided shoulder I, having a flat or leaf spring J, attached to the lifter lever at one end, and adapted to engage the said shoulder at the other end, to prevent the vibration of the machine from turning said adjusting screw, when unauthorized, during operation.

This invention appertains particularly to that class of sewing machines employing a vertically movable foot bar supporting the presser foot, said foot bar being controlled in its raising and lowering movements by a cam of the type set forth.

Having thus fully described the invention, what is claimed as new is:—

1. In combination, a sewing machine head provided with a slot in a side thereof, a foot bar mounted for vertical reciprocating movement in said head, a presser foot carried by said foot bar, spring means normally coacting with the foot bar to force the presser

foot downwardly, a lifter lever pivoted at one end in the head and coacting to control the raising and lowering movement of the foot bar and extending through the slot in the head, means whereby said lifter lever, in coacting with the foot bar may be held at the upper or lower limits of its movement, and an adjusting screw mounted on the outer end portion of the lifter lever and arranged to engage the head when the lifter lever is moved downwardly toward its lower limit of movement, whereby to secure an auxiliary adjustment of the presser foot, said screw being adapted to be carried into an inoperative position when the lifter lever is raised to lift the presser foot.

2. In combination, a sewing machine head, a foot bar movably mounted thereon, a presser foot carried by said bar, spring means normally tending to move said foot bar and presser foot downwardly, a lifter lever on the head movable so as to remain in raised or lowered positions to effect corresponding adjustment of the foot bar, and an adjustable member carried wholly by the lifter lever for engagement with the head and held by the lever in an inoperative position when the lever is raised.

In testimony whereof I affix my signature in presence of two witnesses.

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Witnesses:

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