

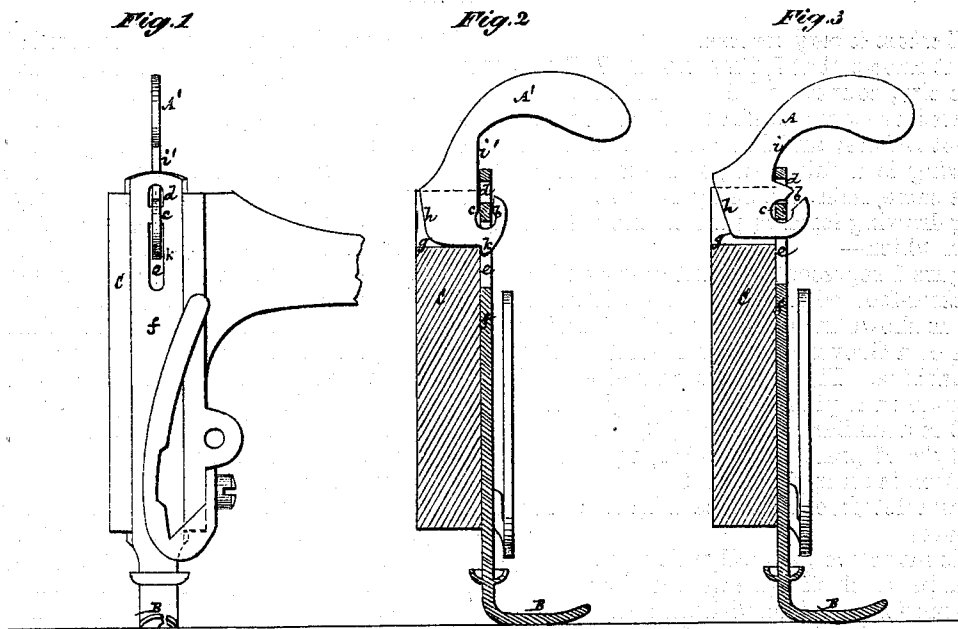
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Improvement in Presser-Foot Lifter for Sewing Machines.

No. 122,256.

Patented Dec. 26, 1871.



Witnesses:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN PRESSER-FOOT LIFTERS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 122,256, dated December 26, 1871.

To all whom it may concern:

Be it known that I, THEODORE W. KENNEDY, of the city, county, and State of New York, have invented a new and useful Improvement in Presser-Foot Lifters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, and in which—

Figure 1 represents a front or toe-end view of a presser-foot with my improved lifter applied to it, as shown in relation to the presser-arm or frame of a Grover and Baker elastic stitch sewing-machine. Fig. 2 is a sectional elevation of the same in a plane at right angles to Fig. 1. Fig. 3 is a similar view to Fig. 2, but showing an old style of presser-foot lifter, upon which my invention is an improvement.

Similar letters of reference indicate corresponding parts.

This invention generally relates to sewing-machines in which the presser-foot has an up-and-down motion in unison with the needle and timely relation to the feeder, as, for instance, in the Grover and Baker elastic stitch sewing-machine, to which my improvement is particularly applicable. The presser-foot lifter of such machines, which is the device that my invention specially relates to, consists of a loose plate-like lever entered within a slot in the top of the presser-arm or frame, and fitting through a perforated and slotted presser-foot, bar, or slide to provide for the self-adjustment of the presser-foot to different thicknesses of cloth, and, by throwing back said lever, to hold the presser-foot up from contact with the fabric. Said lifters, however, as heretofore constructed, have been defective in the following respect, namely, they have been so formed or shaped that the presser-foot bar in rising and falling, and which sometimes equals two hundred and fifty strokes a minute, has produced a corresponding movement of the lifter, throwing it backward and forward each up-and-down movement of the presser-foot, thereby making considerable noise; besides, by its jumping motion in proximity to the work being very annoying to the operator. My improved lifter obviates this defect by constructing it with a straight face or edge that serves as a back to the presser-foot bar, whereby it is both motionless and noiseless so far as the action of said bar upon it is

concerned. Said lifter is also provided with a tooth or shoulder arranged to rest against the presser-arm or frame to keep the lifter from pitching forward when the presser-foot is lifted by work of sufficient thickness to endanger such action.

Referring, in the first instance, to Fig. 3 of the drawing, A represents an ordinary presser-foot lifter as heretofore used on a Grover and Baker elastic stitch sewing-machine, the same being formed with an open eye, *b*, for its fit over and clip of a lifting partition, *c*, that divides an upper orifice, *d*, from the slot *e* in the slide or bar *f* of the presser-foot B; said slot providing for the adjustment of the presser-foot to different thicknesses of cloth. C is the presser-arm or frame in a slot, *g*, at the top of which the lifter A is inserted, and so that on throwing said lifter back till its rear edge *h* rests on the bottom of said slot or lies parallel therewith or thereabout, the presser-foot is lifted and kept raised by the lifter A from contact with the cloth. The front edge *i* of this lifter, against which the back of the bar *f* rests, is of a curved form, and the lifter generally of a shape so that every time the presser-foot rises and falls a corresponding movement or backward and forward motion is communicated to the lifter, as hereinbefore referred to.

This continuous movement and consequent rattle of the lifter is avoided by constructing it as represented in Figs. 1 and 2, in which the lifter A' is formed with a straight front edge, *i'*, at the back of the presser-foot bar *f*, of a length equal to the full stroke of said bar, so that the presser-foot in rising and falling has no action upon the lifter, which remains motionless and silent. Furthermore, said lifter is formed with a tooth or shoulder, *k*, arranged to rest against the presser-arm or frame C, and serving to keep the lifter from pitching forward and becoming detached or displaced when the thickness of the material under the presser foot causes the top of the slot *e* in the bar *f* to project above the upper outer end of the open eye *b* of the lifter. The straight edge *i'* and shoulder *k* combined make the lifter A' perfect in every respect, both as regards its retention in place and non-interference by the bar *f* in the working of the presser-foot.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The presser-lifter A', constructed with an elongated straight edge, *i'*, in front for operation

in relation with the back of the presser-foot bar or of the latter relatively to it, substantially as specified.

2. The presser-foot lifter A', constructed with a tooth or shoulder, *k*, at its base in front for support of the lifter by the presser-bar or frame C, essentially as herein set forth.

3. The combination of the straight edge *v* and

tooth or shoulder *k* formed in or on the presser-foot lifter A', substantially as shown and described.

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Witnesses:

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