

(Model.)

G. W. KEMP.

OVERSEAMING ATTACHMENT FOR SEWING MACHINES.

No. 497,668.

Patented May 16, 1893.

Fig. 1.

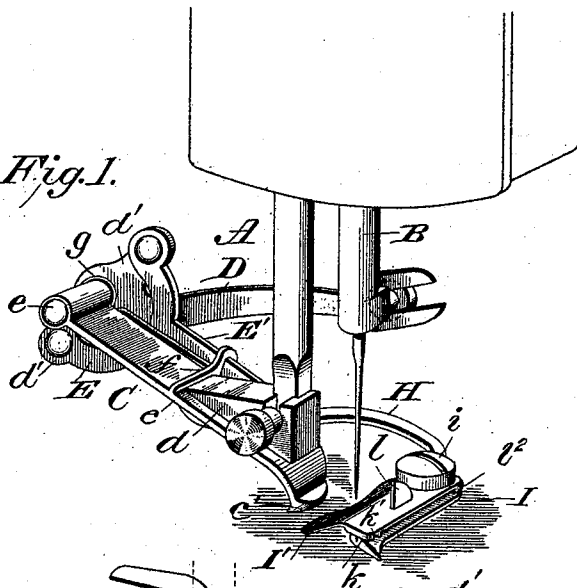


Fig. 2.

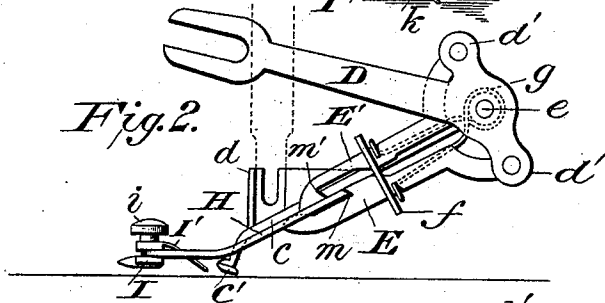


Fig. 3.

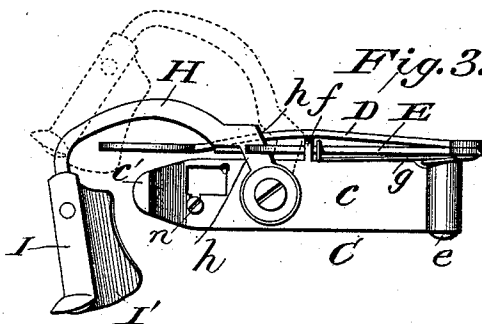
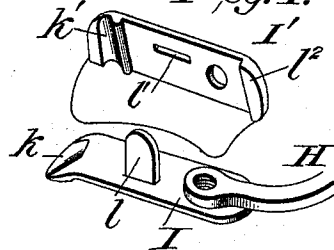


Fig. 4.



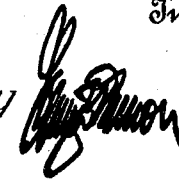
Witnesses

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UNITED STATES PATENT OFFICE.

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OVERSEAMING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 497,668, dated May 16, 1893.

Application filed April 7, 1892. Serial No. 428,203. (Model.)

To all whom it may concern:

Be it known that I, GEORGE W. KEMP, a citizen of the United States of America, residing at Montgomery, in the county of Montgomery and State of Alabama, have invented certain new and useful Improvements in Overseaming Attachments for Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in attachments for sewing machines.

The object of the invention is to provide an improved attachment whereby with a sewing machine of ordinary construction I can overseam or herring-bone stitch the edges of fabrics either of a single or more than a single thickness; and the invention consists in an attachment the frame of which is adapted to be secured to the presser-bar of a sewing machine, said frame forming in part the usual function of the presser-foot, as well as serving as a support for an oscillating arm which carries a guide through which the fabric to be operated upon passes, said guide being oscillated by suitable mechanism which is attached to the frame and engages with the needle-bar; and the invention consists more particularly in the construction and combination of the parts, as will be hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings forming part of this specification: Figure 1 is a perspective view showing my improved attachment applied to a sewing machine. Fig. 2 is a side elevation; Fig. 3 an inverted plan view, and Fig. 4 a detail perspective view of the guides through which the fabric passes.

A designates the presser-bar of the sewing-machine, from which the usual presser-foot has been removed and my attachment applied in lieu thereof.

B designates the needle-bar with which the oscillating arm of the attachment engages to impart the necessary movement thereto.

The frame C of my attachment consists of a plate *c*, to the upper face of which is attached a suitably constructed block *d*, which is cut away or otherwise shaped to receive the end of the presser-bar A and clamp screw for forming a rigid connection therewith. The plate *c* extends downward and the lower bent end thereof is adapted to bear upon the feed-plate of the sewing-machine and take the place of the usual presser-foot. The end *c'* is slightly curved, though it may be of any suitable configuration. The opposite end of the plate from the presser-foot *c'* is apertured for the reception of a pivot pin *e* which works freely in said aperture and carries a lever or operating bar D, which has projections *d'* on opposite sides of its pivot point. The forward end of this lever is bifurcated for engagement preferably with the clamping screw of the needle-bar.

The plate *c* carries about centrally a guide or loop *f* through which passes bars E and E', one end of each of which is held in pivotal engagement with the cross-head or projecting portion *d'* of the lever D. These bars are spring actuated toward each other; the spring, *g*, being made up of a single piece which encircles one end of the plate *c* and has members bent to engage with said bars on the side of the loop or guide *f* toward the pivoted end of the plate.

H designates a curved arm, which is pivoted to the under side of the plate *c*, and this arm is given an abrupt bend near its pivot to present the parallel edges *h h* beyond which the arm may be of any suitable configuration, and to the free end of the same is secured, rigidly, a plate I, said plate being practically a continuation of the arm and has at its outer end a convex guide *k* between which and the end of the arm is an upwardly projecting flat pin *l*. To the plate I and end of the arm H is secured by means of a set screw *i* an apron or plate I', which has near its end a concave recess *k'* and centrally an aperture *l'* through which the pin *l* passes. By means of the set-screw and the lug *l'* on the apron the plates may be adjusted to suit the different thicknesses of fabric, and the convex guide serves to prevent the fabric from being drawn or

pulled from the plates as the arm H is oscillated, but permits the free movement of the fabric in the direction of the feed.

The arms E and E' which engage with the straight portion of the oscillating arm H have ratchets or catches *m* and *m'*, the ratchet of the lower bar E being nearer the pivot so as to engage with the rear beveled edge of the straight portion of the arm, while the upper bar E' has its ratchet nearer the free end of said arm. The lower bar has its free end rounded or beveled so that it will ride upon the beveled portion of the arm without engaging positively therewith, and also ride upon the straight edge of the bar E' beyond the ratchet or catch *m'* thereof or at the outer end of the bar.

In operation, the attachment for over-seaming the edges of a fabric is secured to the presser-foot and needle-bar of a sewing-machine, as illustrated. The set-screw *i* is loosened and the fabric placed between the plates I and I' so that its edge will be toward the pin *l*. The set-screw *i* is then tightened sufficient to prevent the fabric being drawn from between the plates laterally, but not so tight as to prevent the same feeding through or being drawn away from the operator by the action of the usual feed-plate and the presser-foot of the attachment. The adjustment of the feed-plate of the sewing machine will give the desired distance between the stitches, while the depth of said stitches can be adjusted by moving the block *d* to the right or left and securing it in the desired position by the set screw *n*, thus changing relatively the position of the attachment upon the presser foot; and in operation the needle-bar will pass alternately through the fabric and beyond the edges thereof, said fabric being fed to the needle by forward movement as well as an oscillating movement, so that the fabric will be positioned in and out of the path of the needle.

The upper plate I' which is secured to the lower plate I is provided with an inclined projecting portion which extends downwardly and toward the needle-aperture in the bed-plate of the sewing-machine, and the edge of this plate nearest the needle is slightly concaved so that when the same is moved by the oscillating arm it will not contact with the needle. The function of this plate is to keep the fabric in close contact with the bed or feed plate of the machine.

In operation when the lever D is reciprocated the bars E E' which are pivoted to the cross-head thereof will also be reciprocated, and as these bars are forced toward each other by the spring *g*, they will be caused to contact with the arm H, at the point where it is provided with a flat portion with parallel edges which are oppositely beveled, so that the ratchets or notches in the bars E E' will alternately engage therewith, so as to oscillate the arm upon its pivot; one of the bars (as E) pushing the arm H to move it in one

direction while the other bar E' engages with said arm when it has completed its movement and draws upon the same to complete the oscillation, the movement being in an opposite direction.

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

1. In an attachment for sewing machines, an oscillating arm pivoted to a frame, arms adapted to engage therewith and with a lever for the purpose set forth, the free end of the oscillating arm carrying a plate having an upwardly projecting pin and a raised end portion, a plate having an aperture through which the pin passes, and a recess which lies over the raised end portion, and means for connecting the plates to each other substantially as shown.

2. In a sewing-machine attachment having an oscillating arm H to which movement is imparted by the reciprocating action of the needle-bar, a clamp or guide made up of two plates one having on one end a raised portion and on the other plate opposite the raised portion a depression for the purpose of holding the fabric against lateral displacement, the upper plate carrying an inclined fender which extends downwardly toward the bed-plate and needle-aperture therein substantially as shown.

3. In an attachment for sewing machines, the combination with an oscillating arm H pivoted to a frame carried by the presser-bar of a sewing machine, said frame having an oscillating lever which is adapted to be connected to the needle-bar, means for connecting the said arm and lever to impart motion to the arm H from the needle-bar, said arm carrying at its free end forward of the needle-bar plates I and I' the plate I' being adjustably connected to the oscillating arm H, the lower plate having a convex tapered portion adjacent to its outer end, the plate I' having a concave tapered portion above the convex tapered portion of the adjacent plate, substantially as shown.

4. In an attachment for sewing-machines, the combination of an oscillating arm and support therefor, of a plate I having a convex tapered portion at its outer end, said end being bent below the plane of the plate, and a plate I' adapted to be adjustably secured to the plate I, said plate having a concave tapered recess located above the convex tapered portion of the lower plate, means for holding the plates against lateral movement with respect to each other, and a fender or overlapping portion carried by the upper plate, substantially as shown, and for the purpose set forth.

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

GEORGE W. KEMP.

Witnesses:

A. G. FORBES,
THEO. G. BESSER.