

(No Model.)

A. S. SIMONS.
WIDE HEMMER FOR SEWING MACHINES.

No. 504,947.

Patented Sept. 12, 1893.

Fig. 1.

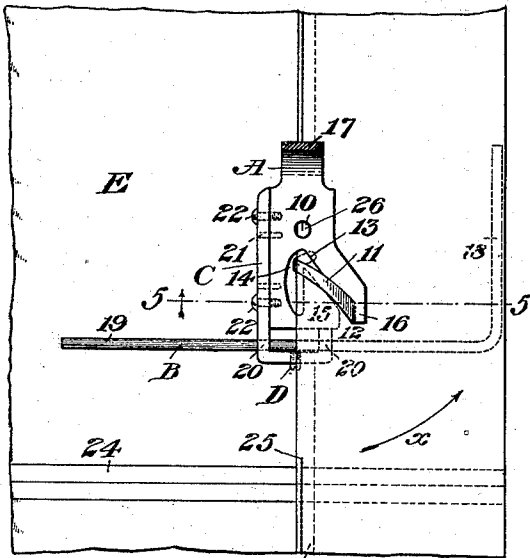


Fig. 2.

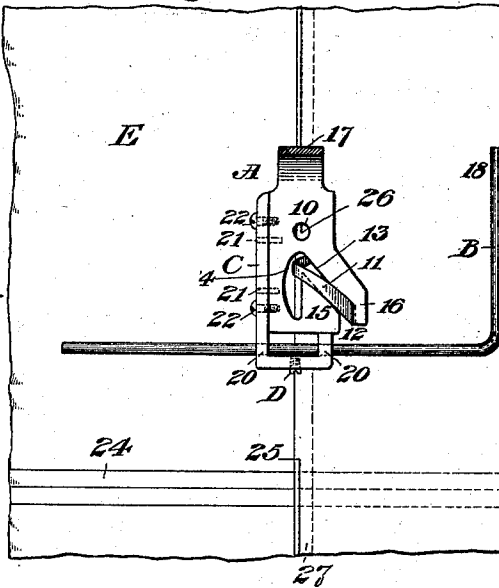


Fig. 3.

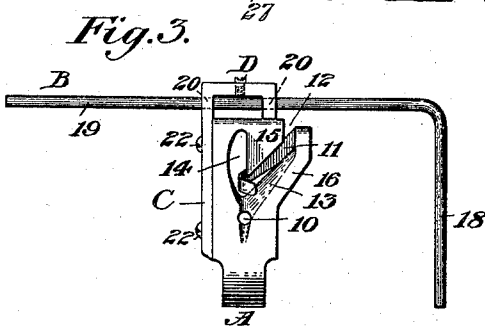


Fig. 4.

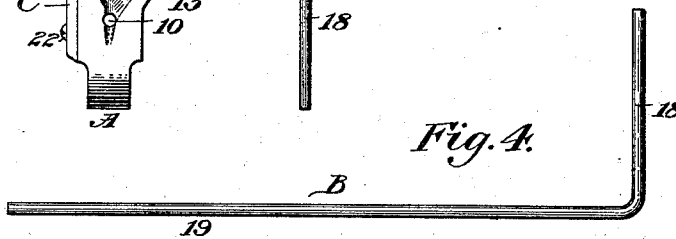


Fig. 5.

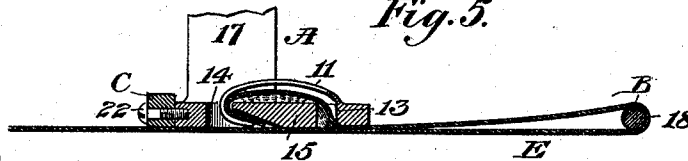
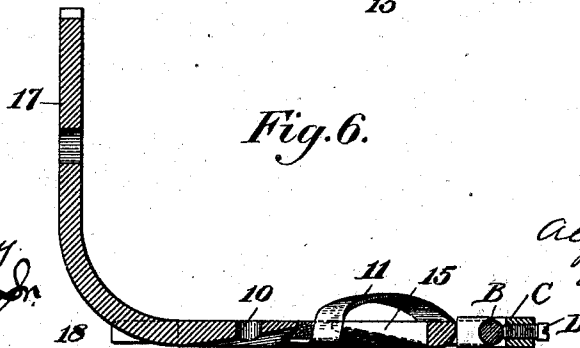


Fig. 6.



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UNITED STATES PATENT OFFICE.

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WIDE HEMMER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 504,947, dated September 12, 1893.

Application filed May 18, 1893. Serial No. 474,664. (No model.)

To all whom it may concern:

Be it known that I, ALFRED S. SIMONS, a citizen of the United States of America, and a resident of Port Chester, Westchester county, in the State of New York, have invented a new and useful Improvement in Wide Hemmers, of which the following is a specification.

This invention relates to hemming attachments for sewing machines, and consists in certain novel combinations of parts herein-after set forth and claimed.

The primary object of the invention is to adapt a sewing machine hemming attachment to hem pillow-cases and the like after they are closed, so as to obviate separately staying the seams, or in other words so as to stay the seams by means of the hem itself. This involves a practically endless wide hem, which it has heretofore been impossible to produce on a sewing machine by means of a hemming attachment, so far as I am aware.

Another object of the invention is to provide for making hems of any required width, up to six inches or more, so that they shall be smooth and of uniform width throughout, and to obviate turning in more of the material than is necessary in forming such hems.

Another object of the invention is to employ a hemming presser-foot of convenient width, capable of independent use, as the basis of the wide hemmer, and to provide for readily and quickly making the required adjustments.

The improved wide hemmer is furthermore of simple construction and not liable to get out of order, and has but one adjusting screw, which conveniently projects toward the operator in the plane of the presser-foot. It can be fitted to any make of sewing machine, and will hem cambric and lawn better than any other hemmer known to me.

A sheet of drawings accompanies this specification as part thereof.

Figures 1 and 2 of the drawings are sectional plan views illustrating the operation of the attachment as employed for hemming pillow-cases and the like. Fig. 3 is a bottom view of the attachment as a whole. Fig. 4 represents an additional fold-gage for wider hems. Fig. 5 represents an enlarged section on the line 5—5 Fig. 1; and Fig. 6 represents a vertical longitudinal section through the

presser-foot and fold-gage in the plane of the needle-hole.

Like reference letters and numbers refer to like parts in all the figures, and the terms right and left are in all cases used with reference to the respective hands of the operator.

The improved attachment as a whole consists of a hemming presser-foot A preferably of the kind known as "steel," and of the peculiar construction hereinafter set forth, an adjustable fold-gage B which is conveniently and preferably L-shaped and of steel wire, a metallic support C for said fold-gage, formed on or attached to said presser-foot, and a fastening, preferably in the form of a single horizontal screw D, as aforesaid, for holding the fold-gage in its several positions for hems of different widths.

The specific hemming presser-foot shown at A has the customary needle-hole and oblique curling finger 11, together with an indented entrance 12 at its right-hand edge, and an oblique passageway 13 extending inward from said entrance to the plane of the needle-hole which facilitate entering and withdrawing the cloth, a space 14 extending backward toward the toe of the presser-foot to the left of said plane, which space is hereinafter termed the curling recess, and a rigid cloth-supporting solid separator 15 projecting rearwardly from the toe end of the foot to the right of said curling recess 14, and having a straight left-hand edge in line with the needle-hole and a smooth oblique right-hand edge bounded by said passageway 13. The bottom of the foot, Fig. 3, is suitably beveled as shown in Figs. 3, 5 and 6, and the sole of the laterally projecting toe 16 which supports the curling finger 11 is ground off at bottom so as to freely admit beneath it two thicknesses of the cloth (shown at E) as compared with one thickness beneath the opposite edge of the foot. See Fig. 5. The shank 17 corresponds with that of the other presser-feet of the machine on which the attachment is to be used; and this may be any make of sewing machine.

The L-shaped fold-gage shown at B has a straight rearwardly projecting effective portion 18 parallel to the line of feed, around which to fold the wide hems as in Figs. 1 and 5, and a relatively long stem 19 at right angles to said effective portion, which is held in

said support C, by means of said screw D. The fold-gage is bent so that the goods being sewed will not "draw," and it extends back beyond the needle-hole so that portions of the stitching and of the gage are parallel with each other. A set of two or more such gages is preferably employed, as illustrated by Fig. 4, so that the stem 19 of the gage in use will not project unduly at the left. The effective portion 18 may in all cases be about the length of the presser-foot.

The gage-support shown at C is composed of a bent bar drilled to form a pair of guides 20 fitted to the stem 19 of the fold-gage B, and provided with a tapped hole midway between said guides and at right angles thereto, which is fitted to the screw D; and it is attached to the presser-foot A by dowels 21 and screws 22 so as to be detachable. The fastening screw D projects horizontally toward the operator, and is adapted to be loosened and tightened by means of a screw-driver. Owing to its projection horizontally instead of vertically, the screw lies between the folds of the cloth and permits the cloth to be stretched smoothly between the straight edge of the separator 15 and that portion of the fold-gage B parallel therewith, and thus facilitates making the inturn narrow and uniform as hereinafter pointed out, also the employment of a gage-support which need not project materially above the plane of the fold-gage. See Fig. 6. By tightening the screw the fold-gage is readily sprung between its guides 20 to a sufficient extent to render the fold-gage absolutely fast against displacement by the strain thereon in line with the stem 19. Uniformity in the width of a given hem is thus insured.

The gage-support C, instead of being detachable as above, may be formed on the presser-foot, or fixedly attached by solder, a different screw or other known fastening device may be employed in place of the screw D as aforesaid in the combination of the fold-gage B with the peculiarly constructed hemming presser-foot A as above, and other like modifications will suggest themselves to those skilled in the art.

The fold-gage B having been adjusted for a hem of the required width, the cloth E to be hemmed as in Figs. 1 and 5 is brought under the presser-foot and fold-gage from the left, and then around said effective portion 18 of the fold-gage, after which the edge is inserted, through said entrance 12 and oblique passageway 13 of the presser-foot, beneath its curling finger 11, and around the straight edge of the separator 15. The presser-foot is then lowered, and the folded hem is stitched in customary manner.

In making an endless hem, Figs. 1 and 2, after the pillow-case or other like article (hereinafter termed the pillow-case) has been closed by its longitudinal seam 24, the hem is begun, as at 25, near said seam, so as to neatly hem across the flattened seam, and thus securely stay it; and the hemming progresses without complication until a point 26 is reached about the width of the hem from said starting point 25. The machine is then stopped with the needle "down;" the presser-foot is lifted, in practice by means of a convenient knee-actuated lever; and the pillow-case is turned, on the needle as a pivot, as illustrated by the arrow *x* in Fig. 1, until the presser-foot and fold-gage are cleared; after which the hem is readjusted beneath the presser-foot and fold-gage as in Fig. 2, and the stitching is completed. All the required movements can be made by ordinary operators with the utmost rapidity; and smooth and perfect hems of any required width, whether endless or on sheets or the like, and in thick cotton cloth or in cambric lawn or the like, are thus readily formed of absolutely uniform width, and with as narrow an inturn 27, Figs. 1 and 2, as may be practicable, and thus with saving of both time and cloth as compared with their production by other known means.

Having thus described the said improvement, I claim as my invention and desire to patent under this specification—

1. The combination of a hemming presser-foot having the customary needle-hole curling finger and curling recess, together with an indented entrance, an oblique passageway extending inward from said entrance, and a solid separator the left-hand edge of which is a straight edge in line with said needle-hole, and a laterally adjustable fold-gage supported by the toe of said foot and having an effective portion which extends rearwardly beyond the needle-hole in a line parallel to said straight edge and to the line of feed, substantially as hereinbefore specified.

2. The improved wide hemmer composed of a hemming presser-foot, an L-shaped fold-gage of wire or the like having a rearwardly projecting shorter-portion parallel to the line of feed and a relatively long stem, a support attached to said foot and having a pair of guides for said stem, and a horizontal screw coacting with said stem between said guides to fasten said fold-gage, substantially as hereinbefore specified.

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Witnesses:

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