

(No Model.)

2 Sheets—Sheet 1.

S. BORTON.
SEWING MACHINE.

No. 561,043.

Patented May 26, 1896.

Fig. 1,

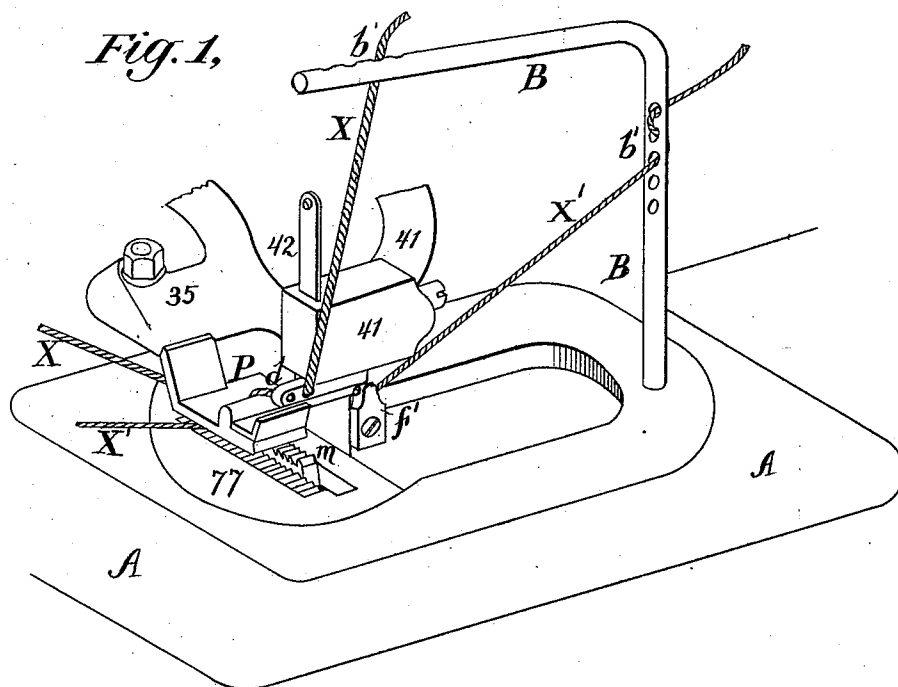
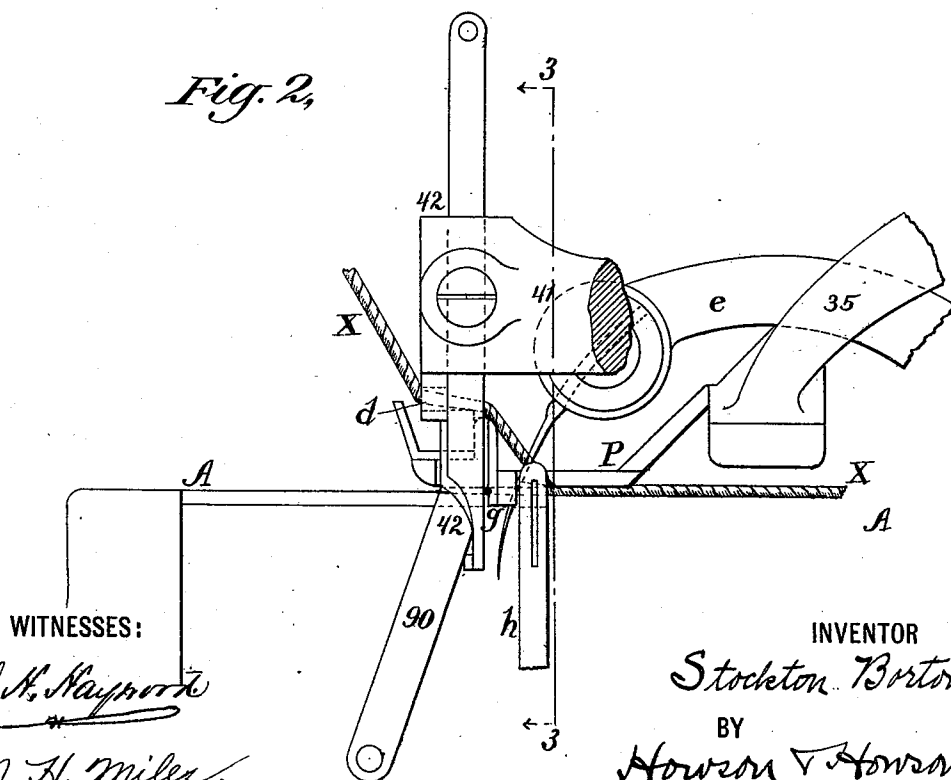


Fig. 2,



WITNESSES:

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2 Sheets—Sheet 2.

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Fig. 3,

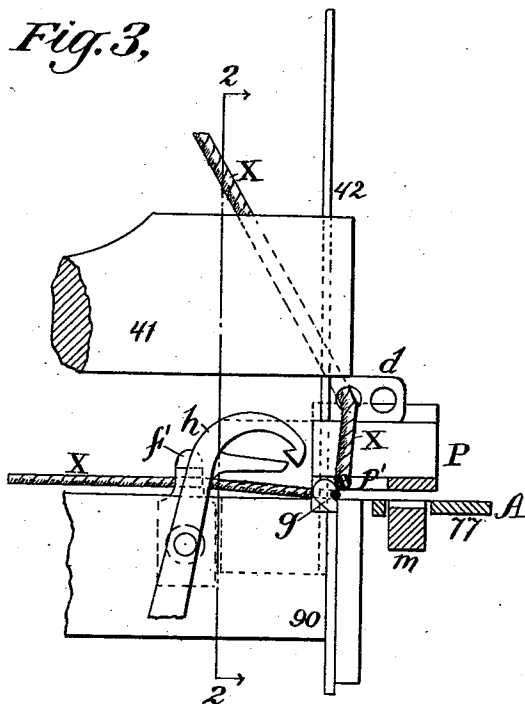


Fig. 4,

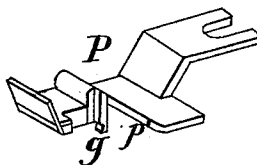
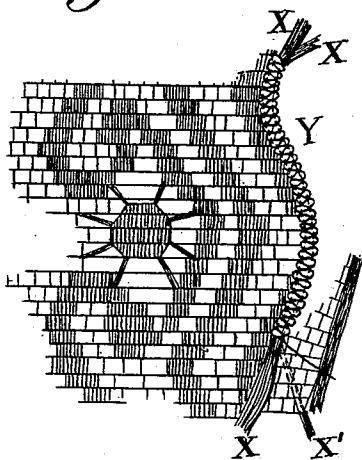


Fig. 5,



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UNITED STATES PATENT OFFICE.

STOCKTON BORTON, OF BROOKLYN, NEW YORK, ASSIGNOR TO THE WILL-COX & GIBBS SEWING MACHINE COMPANY, OF NEW YORK, N. Y.

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 561,043, dated May 26, 1896.

Original application filed August 24, 1894, Serial No. 521,226. Divided and this application filed February 13, 1896. Serial No. 579,144. (No model.)

To all whom it may concern:

Be it known that I, STOCKTON BORTON, a citizen of the United States, and a resident of Brooklyn, Kings county, New York, have invented Improvements in Sewing-Machines, of which the following is a specification.

The object of my invention is to construct a machine for making automatically and with speed and economy an edging on lace or similar open-work goods, such edging being at once durable, neat, attractive, and in harmony with the work of which the body of the goods is composed. For this purpose I construct a machine which trims the lace to the desired outline, simultaneously lays one or more cords along the edge across the open spaces and loose ends in the cut edge, and overseams the cord or cords in place, thus binding the cords down by the stitching, so that the stitching and cord or cords cannot be pulled out in ordinary use, and producing at one operation a finished edging equally good on both faces.

In the accompanying drawings, Figure 1 is a perspective view of a sewing-machine provided with my improvements. Fig. 2 is a sectional view on the line 2 2, Fig. 3. Fig. 3 is a sectional view on the line 3 3, Fig. 2. Fig. 4 is a perspective view of the presser-foot; and Fig. 5 is a view illustrating the work done by the machine.

The sewing and trimming part of the mechanism which I prefer to use in my present invention is the overseaming sewing-machine, for which a patent was granted to me, in conjunction with Charles H. Willecox, April 5, 1892, No. 472,095, and in the accompanying drawings I have shown only so much of the machine of that patent as will be necessary to an understanding of my present invention. The parts of the sewing and trimming mechanisms illustrated in the drawings are substantially the same as those set forth in the patent.

Thus A represents a portion of the bed-plate, *e* the needle-bar, and *h* the looper, Fig. 2. The presser-bar 35 carries the presser-foot P, and below is the throat-plate 77, of any suitable construction, and through which works the feed-dog *m*. The upper and moving shear-blade 42 is carried by the vertically-

vibrating arm 41, while the lower blade 90 is fixed, but adjustable in the bed-plate.

Upon the bed-plate A is mounted a bent arm B, which at *b* and *b'* is provided with any suitable number of guide or tension eyes for the upper cord or cords X and the lower cord X'. I will describe the device as adapted to feed two edging-cords, one above and one below the edge of the lace. In practice I prefer to use for the front face of the lace a cord or cords slightly heavier than the one for the back face.

Upon a suitable vibrating arm I provide one or more eyes *d* for the passage of the upper cord or cords, and for this purpose I prefer to use the arm 41, which carries the upper shear-blade. The cord X is thence carried down through the slot *p'* of the presser-foot and under the back part of the presser-foot, as shown in Figs. 1 and 2, so that each time the arm 41, with its guide-eyes *d*, descends a sufficient amount of cord will be pulled off the bobbin for the next stitch.

The lower cord X' after leaving the guide-eyes B' may be passed through a fixed guide-eye *f'* on the bed-plate A, whence it passes to the under side of the presser-foot P. Upon the latter I provide a pendent hook or open eye *g*, Figs. 2 and 4, which lies with its open side adjacent to the back of the upper shear-blade, so that the latter nearly closes the eye, leaving, nevertheless, sufficient of an opening or slit for the sidewise introduction of the cord X' from below. By this means I avoid the trouble of having to thread the cord through an eye at a point where it would be awkward to do it; but the cord when once in the open eye will stay there.

From the foregoing description it will be seen that when the lace is laid in the machine under the presser-foot with one or more cords above the lace and one below the cutters 42 and 90 will trim off the surplus edge of the lace a little in advance of the sewing and the cords will be laid across the open spaces and loose ends of the edge of the lace and the overseaming stitches will be made over the body thus provided, binding the cords to the otherwise loose frail edge and clamping the latter between the cords, Fig. 5.

I claim as my invention—

1. The mechanism herein described for edging lace, comprising means for trimming the lace to the desired outline, and means for simultaneously laying one or more cords along the edge across the open spaces and loose ends in the cut edge, in combination with means for simultaneously overseaming the cord or cords in place, substantially as described.

2. The mechanism herein described for edging lace, comprising means for trimming the lace to the desired outline and means for simultaneously laying one or more cords along the edge across the open spaces and loose ends in the cut edge, in combination with means for simultaneously overseaming the cord or cords in place immediately behind the trimming, substantially as described.

3. An overseaming stitching mechanism, and a trimming device in conjunction therewith, in combination with a set of cord-guides to lay a cord upon the cut edge of the goods in position to be stitched to the latter by the overseaming stitches, substantially as described.

4. An overseaming stitching mechanism and a trimming device in conjunction therewith, in combination with two sets of cord-guides one to lay a cord or cords upon, and the other to lay a cord under, the cut edge of the goods in position to be stitched to the latter by the overseaming stitches, substantially as described.

5. An overseaming stitching mechanism, in combination with a presser-foot, having a slot p' open at the side, through which a cord may be passed, of a vertically-vibrating arm over the said presser-foot, and carrying an eye for a cord, substantially as described.

6. An overseaming stitching mechanism, in combination with a presser-foot having upon its under side a pendent eye for the reception and guidance of a cord to the edge of the material stitched, substantially as and for the purpose set forth.

7. An overseaming stitching mechanism, in combination with a presser-foot having upon its under side a downwardly-extending projection grooved to form an eye open at the side for the reception and guidance of a cord to the edge of the material stitched, substantially as and for the purpose set forth.

8. An overseaming stitching mechanism, in combination with a presser-foot having a slot p' through which a cord may be passed, with an eye guiding said cord over the presser-foot to said slot, substantially as described.

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

STOCKTON BORTON.

Witnesses:

ALBERT A. TAYLOR,
LOUIS CLUMP.