No. 690,027. Patented Dec. 31, 1901.

J. KYNASTON.

MACHINE FOR LOOPING AND STITCHING SUPPORTING TAPES TO CURTAINS.

(Application filed May 16, 1900.)

(No Model.)

FIG. II

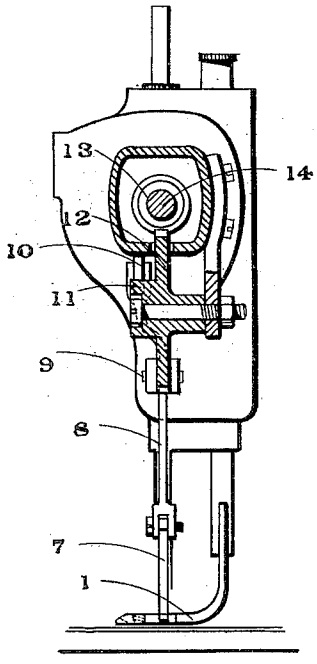


FIG. I

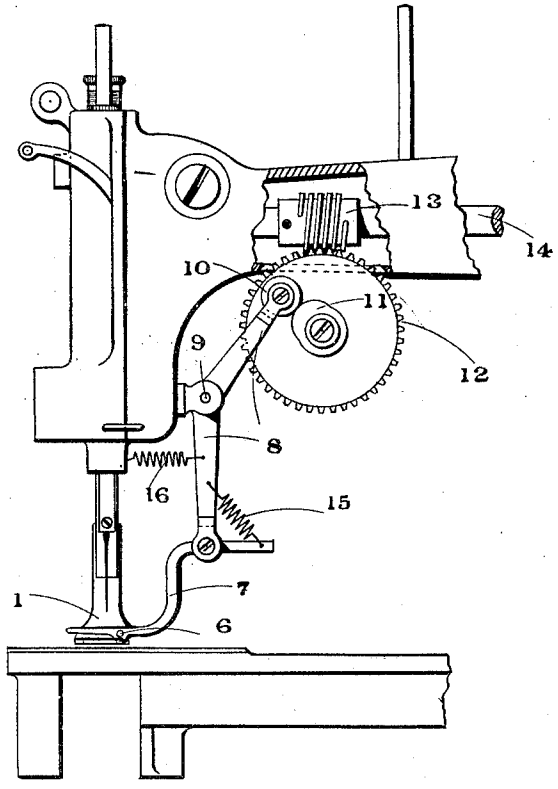


FIG. III

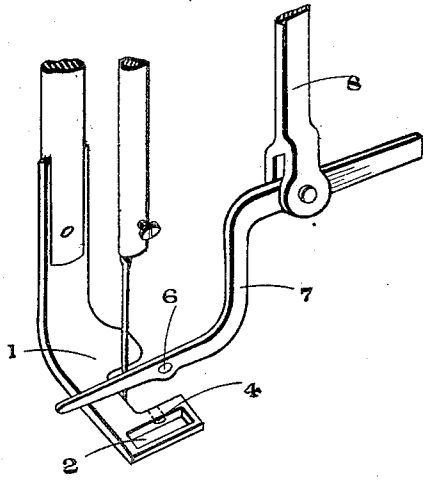
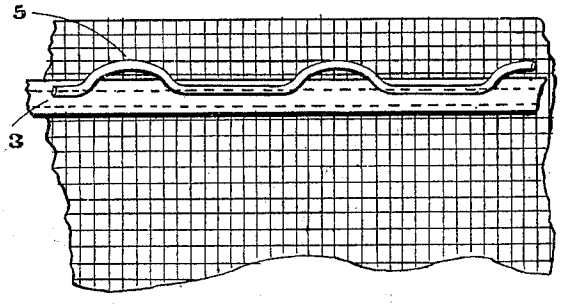


FIG. IV



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UNITED STATES PATENT OFFICE.

JOHN KYNASTON, OF LIVERPOOL, ENGLAND.

MACHINE FOR LOOPING AND STITCHING SUPPORTING-TAPES TO CURTAINS.

SPECIFICATION forming part of Letters Patent No. 690,027, dated December 31, 1901.

Application filed May 16, 1900. Serial No. 16,923. (No model.)

To all whom it may concern:

Be it known I, JOHN KYNASTON, a subject of the Queen of Great Britain, residing in Liverpool, in the county of Lancaster, England, have invented certain new and useful Improvements in Machines for Looping and Stitching Supporting-Tapes to Curtains or to Curtain-Heading Bands or the Like, of which the following is a specification.

This invention relates to a machine for looping and stitching supporting-tapes to curtains or to curtain-heading bands or the like. In attaching curtains to the rings of the curtain-poles it is found that the curtains hang much more neatly and wear much better if the head of the curtain is provided with a looped tape by means of which the attachment is made to the rings, and which tape is attached either to the curtain directly, when the fabric is strong enough, or to a band stitched to the curtain when the latter is woven openly, as in the case of lace curtains. The tape requires to be attached to the curtains or the curtain-bands, as the case may be, at intervals, so as to form loops for attachment to the rings, or in the case of small curtains to the rod or string which supports the curtain; and the object of my invention is to provide a machine adapted to attach the tape at intervals to the curtain or to the curtain-band or to attach both the tape and the band to the curtains at the same time. The actual stitching is done by a sewing-machine the presser-foot of which is modified, as hereinafter described, and a mechanism is provided by means of which the tape is at intervals withdrawn laterally from the line of stitching to form the loop.

I have illustrated my invention in the accompanying drawings in reference to a "Wheeler & Wilson" sewing-machine. Only such portions of the machine are shown as are necessary to explain the action of the apparatus, and of course any other type of sewing-machine may be employed.

Figure I is an elevation; Fig. II, a fragmentary end elevation; Fig. III, a perspective view showing the modification of the presser-foot, and Fig. IV is a view showing the mode in which the band and the looped tape are attached to the curtain.

1 is the presser-foot of the sewing-machine, which is provided with a slot 2, through which the heading-band 3 is guided, and a hole 4, through which the tape 5 (which in the present case is assumed to be of circular cross-section) is guided. Under ordinary circumstances both the band and the tape would be stitched to the curtain as they and the curtain are fed to the machine; but in order to loop the tape it is further guided through a hole 6 in the lever 7.

The lever 7 is jointed to one end of a bell-crank lever 8, which is pivoted to the frame at 9. The other end of the bell-crank carries a cam-roller 10, operated by a cam 11, carried on the worm-wheel 12, which in turn is rotated by the worm 13, keyed to the shaft 14 of the sewing-machine. From an inspection of Fig. I it will be seen that the bell-crank lever is periodically oscillated by the cam and that as a result the lever 7, and with it the tape 5, is drawn away laterally from the line of stitching, and a loop of the required length is thereby formed.

The lever 7 is pivoted so as to allow the toe of it to rise when the presser-foot is raised, or the toe may be raised independently by depressing the other end of the lever. The toe of the lever is pressed onto the presser-foot by a spring 15, and the bell-crank lever is provided with a spring 16, which tends to keep the cam-roller in contact with the cam.

It is to be understood that I do not limit myself to the precise details of the mechanism shown for withdrawing the tape, as it is obvious that it may be modified to suit the particular kind of sewing-machine to which it is attached.

In some cases I find it of advantage to use a machine with two needles, the one to continuously stitch the one edge of the band 3 to the curtain and the other to continuously stitch the other edge of the band to the curtain, but to intermittently stitch the tape to the band and curtain.

The curtain, with the band and looped tape attached, is shown clearly in Fig. IV.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In combination in a sewing-machine, a presser-foot provided with a fixed tape-guide, a pivoted lever forming a movable guide for

the tape, a spring for holding the latter guide in proximity to the former, a second pivoted lever carrying the first lever, and means for intermittently oscillating said lever whereby the movable guide is shifted toward and from the fixed guide, substantially as described.

2. In combination, in a sewing-machine, a presser-foot provided with a fixed tape-guide, a pivoted lever forming a movable guide for the tape, a lever pivoted to the sewing-machine head and carrying the first-named lever at its lower end, a spring connecting said levers and tending to throw the guiding end of the first-named lever downwardly, and means for oscillating the second lever, substantially as described.

3. In combination, with a sewing-machine, a bell-crank lever pivoted to the head thereof, a spring acting on said lever, a cam operated by the movement of the sewing-machine and bearing against one arm of said lever, a lever pivoted to the other arm of said bell-crank lever and having a movable tape-guide, a spring exerting tension on said last-named lever and a presser-foot carrying a fixed tape-guide, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JNO. KYNASTON.

Witnesses:
J. E. LLOYD BARNES,
JOSEPH E. HIRST.