

(No Model.)

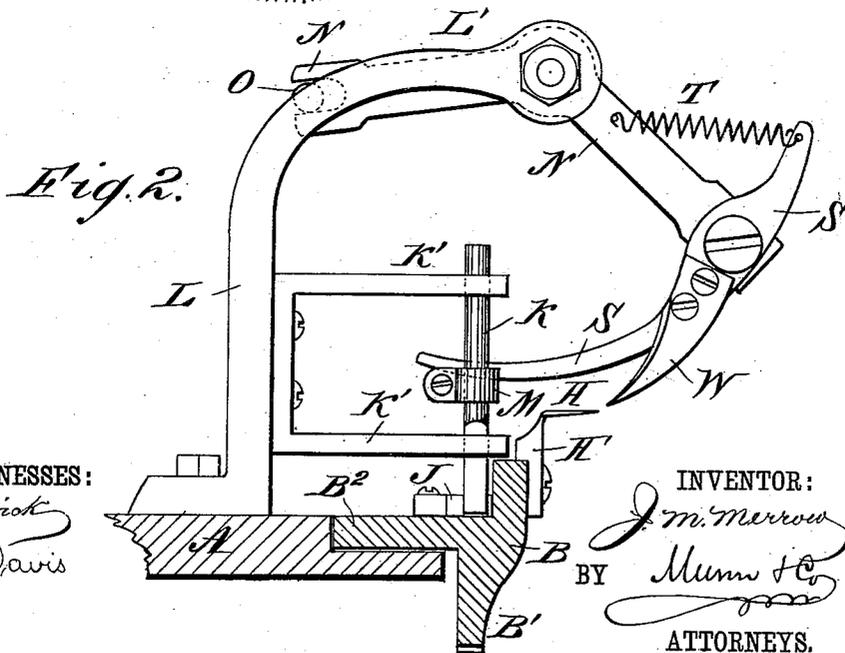
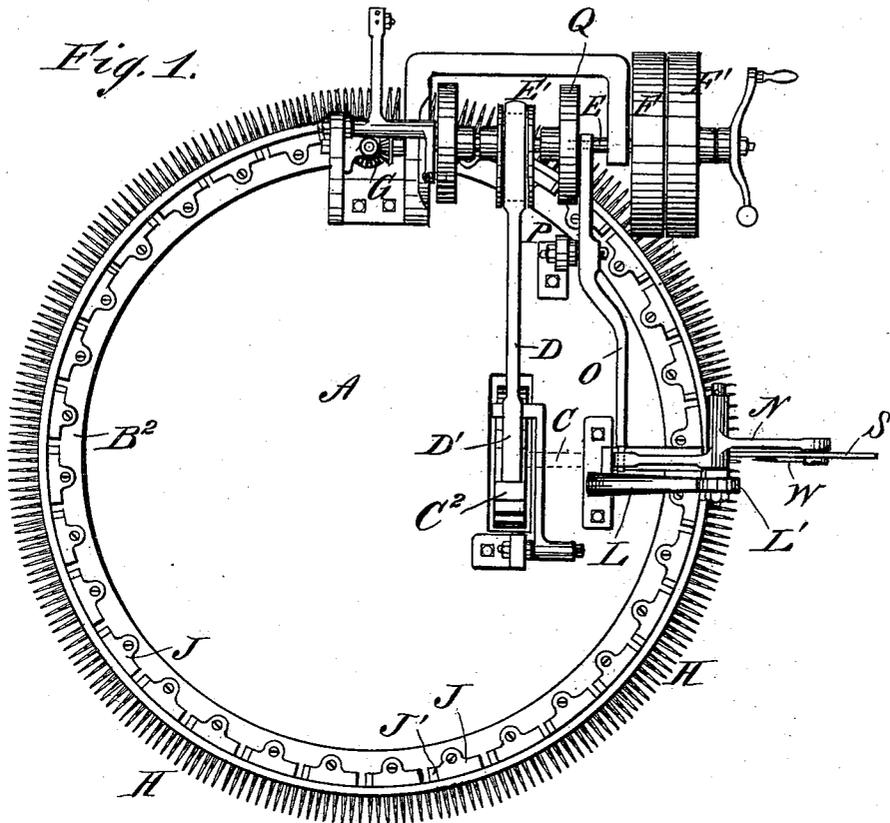
2 Sheets—Sheet 1.

J. M. MERROW.

MACHINE FOR SEWING LOOPED FABRICS.

No. 330,606.

Patented Nov. 17, 1885.



WITNESSES:

*C. Sedgwick*  
*A. H. Davis*

INVENTOR:

*J. M. Merrow*  
 BY *Munn & Co*  
 ATTORNEYS.

(No Model.)

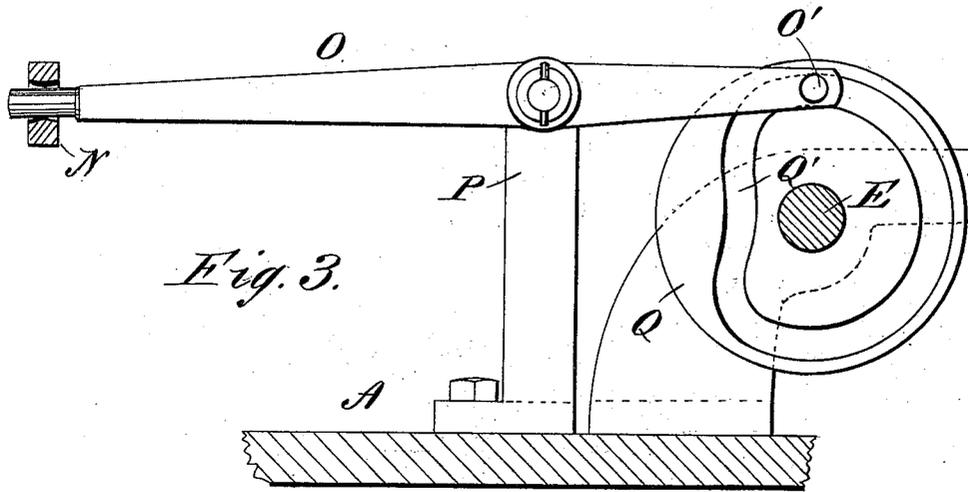
2 Sheets—Sheet 2.

J. M. MERROW.

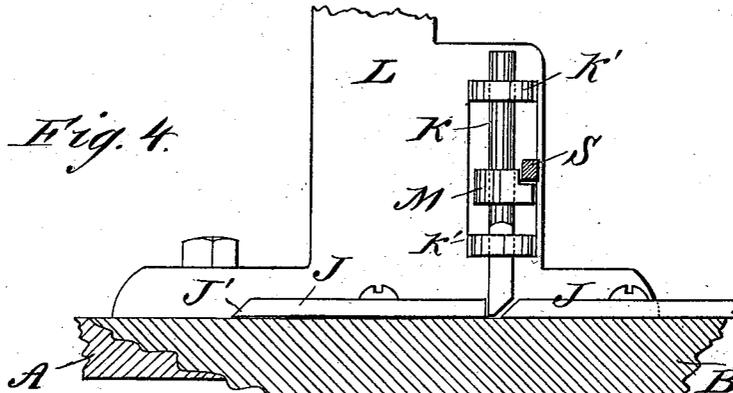
MACHINE FOR SEWING LOOPED FABRICS.

No. 330,606.

Patented Nov. 17, 1885.



*Fig. 3.*

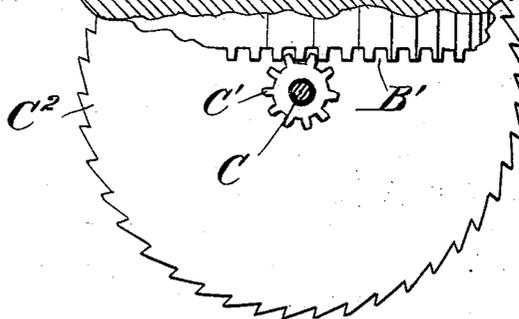


*Fig. 4.*

*Fig. 5.*



*Fig. 6.*



WITNESSES:  
*C. Sedgwick*  
*A. B. Davis*

INVENTOR:  
*J. M. Merrow*  
 BY *Munn & Co*  
 ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JOSEPH M. MERROW, OF MERROW, CONNECTICUT.

## MACHINE FOR SEWING LOOPED FABRICS.

SPECIFICATION forming part of Letters Patent No. 330,606, dated November 17, 1885.

Application filed October 14, 1884. Serial No. 145,461. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH M. MERROW, of Merrow, in the county of Tolland and State of Connecticut, have invented a new and Improved Machine for Sewing Looped Fabrics, of which the following is a full, clear, and exact description.

This invention relates to certain new and useful improvements in machines used for uniting parts of stockings or other knit work or fabric; and the object of my invention is to provide a new and improved attachment for such machines, whereby the chain of thread that unites the several articles that have been sewed is cut automatically, and the said articles are automatically severed, whereas heretofore they were united by the chain of thread, and had to be cut and severed by hand, thus causing much loss of time and considerable expense.

The invention consists in the combination, with a machine for sewing looped fabrics, of an automatically-operated knife for cutting the chain of thread, all as will be fully set forth hereinafter.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of my improved machine. Fig. 2 is an enlarged detail, partly in sectional elevation, of part of the same. Fig. 3 is a side view of the cam and the lever operated by it. Fig. 4 is side view of the device for raising the cutter. Fig. 5 is a cross sectional view of one of the points or pins. Fig. 6 is a plan view of the same.

A circular bed-plate or base, A, is secured on a suitable support, preferably a column, resting on the floor, and on and around the bed-plate A a ring, B, revolves, which is provided in its bottom edge with cogs B', engaging with a pinion, C', on the outer end of a shaft, C, on the inner end of which is mounted a ratchet-wheel, C', with which a pawl, D', engages, which is secured or pivoted on the free end of a connecting-rod, D, the other end of which surrounds an eccentric disk, E', mounted on a shaft, E, provided with the loose and fixed belt-pulleys F F'. The shaft E operates a sewing or looping device, G, adjacent to the

inner surface of the ring B, which looping or seaming device can be of any desired suitable construction. On the outer surface, and at the upper edge of the ring B, a series of clips, H', are fastened, from the upper ends of which points H project outward radially, the said points tapering toward their free ends, and being grooved in their upper surfaces to adapt them to receive the needle of the looping or sewing device. The points H are arranged about the same distance apart as the stitches of knit fabric are usually separated. On the upper surface of the inwardly-projecting horizontal part B<sup>2</sup> of the ring B a series of removable pattern-lags, J, are held by screws, the pattern-lags each having one end, J', beveled. On that part of the ring B on which the pattern-lags are secured the lower beveled end of a rod, K, rests, which is held to reciprocate vertically in arms K', projecting from a standard, L, the upper end, L', of which standard is curved outward. A collar, M, is clamped by means of a screw, or pinched on the rod K, which collar can be adjusted higher or lower. In the upper end of the curved upper part of the standard L' an elbow-lever, N, is pivoted, which has its inner end forked, into which forked part the rounded end of a lever, O, passes, which is pivoted on a standard, P, and has a pin, O', on the other end, which pin passes into a cam-groove, Q', in a disk, Q, mounted rigidly on the shaft E, and revolving with the same. In the outer lower end of the elbow-lever N a curved arm, S, is pivoted, the lower inner part of which rests on the adjustable collar M on the rod K, the upper end of the said curved lever S being drawn toward the outwardly-projecting arm of the elbow-lever N by a spring, T, secured on the lever N and on the outer upper end of the arm S. A slightly-curved pointed cutter or blade, W, held on one side of the pivoted arm S, projects from the bottom edge of the same sufficiently to clear the tops of the points H, but also to come in very close proximity to the said points. The length of the pattern-lags J must correspond with the lengths of the sewed or seamed edges—that is to say, there must be a break in the pattern-lags wherever there is a break in the articles placed on the machine. If eight

articles are held on the points H<sup>2</sup>, there must be eight corresponding breaks in the pattern-lags.

To sew an article or unite two free edges of the same, the said article is held on the ring by passing the loops of both edges upon the points—that is, both edges are held on the same set of points. The shaft E is revolved, and, by means of the rod D and pawl D', revolves the ratchet-wheel C<sup>2</sup> on the shaft C, from which, by means of the pinion C', the ring B is revolved, and the work thus carried past the looper. The lever O is rocked by the disk Q, and rocks the elbow-lever N, whereby the cutter W will be reciprocated on a curved line, and will be carried over the points H. At the end of each pattern-lag the rod K drops, and the inner end of the arm S moves down with it, thus bringing the blade W in such a position that during its next inward movement it can cut the chain of thread passing across or over that point over which the blade passes. The next pattern-lag as it moves along raises the rod K, whereby the arm S is raised by the collar M to such an extent that the knife W is raised to such a height that it passes over the points without coming in contact with or severing the thread uniting the parts. The spring T at all times keeps the lower end of the rod S pressed on the collar M. The arm S, carrying the blade or cutter W, rocks or reciprocates on a curved line continually, but cuts only when the rod K has dropped, as at that time only the knife is lowered sufficiently to enable it to cut the threads. It is evident that the knife can cut only at the end of each lag, and thus by changing the lengths of the lags a greater or less number of cuts by the blade W can be made during each revolution of the ring B. It is convenient in practice to leave one, two, or more blank points between two pieces of fabric that are to be sewed together. For instance, one half of the toe of a sock is placed upon a certain number of points—say six—and the stitches of the other half of the toe are placed on the same points, and they are then placed together, the needle of the sewing or stitching device passing through the grooves in the points H. The collar M should always be so adjusted that when the knife W is at its lowest point it will pass through the groove in the corresponding point H. It is evident that the stitches must be placed upon the points H in such a manner that the spaces between the parts to be sewed must coincide with the space in the pattern-lags. To facilitate this, the points H at the ends of the lags are either made shorter, to distinguish them, or made of a different-colored metal, or may be provided with other suitable marks.

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

1. In a machine for sewing looped fabrics, the combination, with a revolving ring having points on its periphery, of a continuously re-

ciprocating cutter and means for lowering the said cutter during its reciprocation, to cause it to sever the chain of thread uniting the several pieces on the machine, substantially as herein shown and described. 70

2. In a machine for sewing looped fabrics, the combination, with a revolving ring having points on its periphery, of a cutter, means for continuously reciprocating the same over the points, and means for lowering the said cutter during its reciprocation, to sever the chain of threads uniting the several pieces on the machine, substantially as herein shown and described. 80

3. In a machine for sewing looped fabrics, the combination, with a bed and a revolving ring having points on its periphery, of a rocking lever carried by a support on the bed, a cutter on the end of the lever, and means for rocking the said lever and lowering the cutter, substantially as herein shown and described. 85

4. The combination, with a bed, a revolving ring having points on its periphery, a driving-shaft, a seaming device operated thereby, and means for operating the said ring from the driving-shaft, of a rocking lever pivoted in a support on the bed, a cutter on the end of said lever, and means for operating said rocking lever from the drive-shaft, substantially as herein shown and described. 90

5. The combination, with a revolving ring carrying a series of points on which loops of pieces of knit fabric to be united can be placed, of a looping or seaming device, a shaft for operating the looping or seaming device, a ratchet, pawl, and pinion for revolving the ring, and operated from the shaft, a knife or cutter operated from the above-mentioned shaft and serving to sever the chain of thread uniting the several pieces of knit fabric held on the points, pattern-lags on the ring, and of a piece operated by the pattern-lags, on part of which piece the arm carrying the knife rests, substantially as herein shown and described. 100

6. The combination, with a revolving ring carrying a series of points on which the loops of pieces of knit fabric to be united can be placed, of a looping or seaming device, a shaft for operating the looping or seaming device, a ratchet, pawl, and pinion for revolving the ring, and operated from the shaft, a swinging arm pivoted on a suitable fixed standard, a lever acted upon by a cam on the shaft and operating the said rocking lever, an arm pivoted on the lever and carrying a knife, a spring connected with the said lever and the rocking arm, pattern-lags on the revolving ring, a piece operated by the pattern-lags, on part of which piece one end of the arm to which the blade is secured rests, substantially as herein shown and described. 110 115 120 125

JOSEPH M. MERROW.

Witnesses:

WM. WALDO HYDE,  
CHARLES P. WATSON.