

2 Sheets—Sheet 1.

No. 353,487.

Patented Nov. 30, 1886.



WITNESSES:

L. Douville  
W. F. Fisher

BY

INVENTOR:

INVENTOR:  
Louis Epchner.  
Phua Giedersheim  
ATTORNEY.

(No Model.)

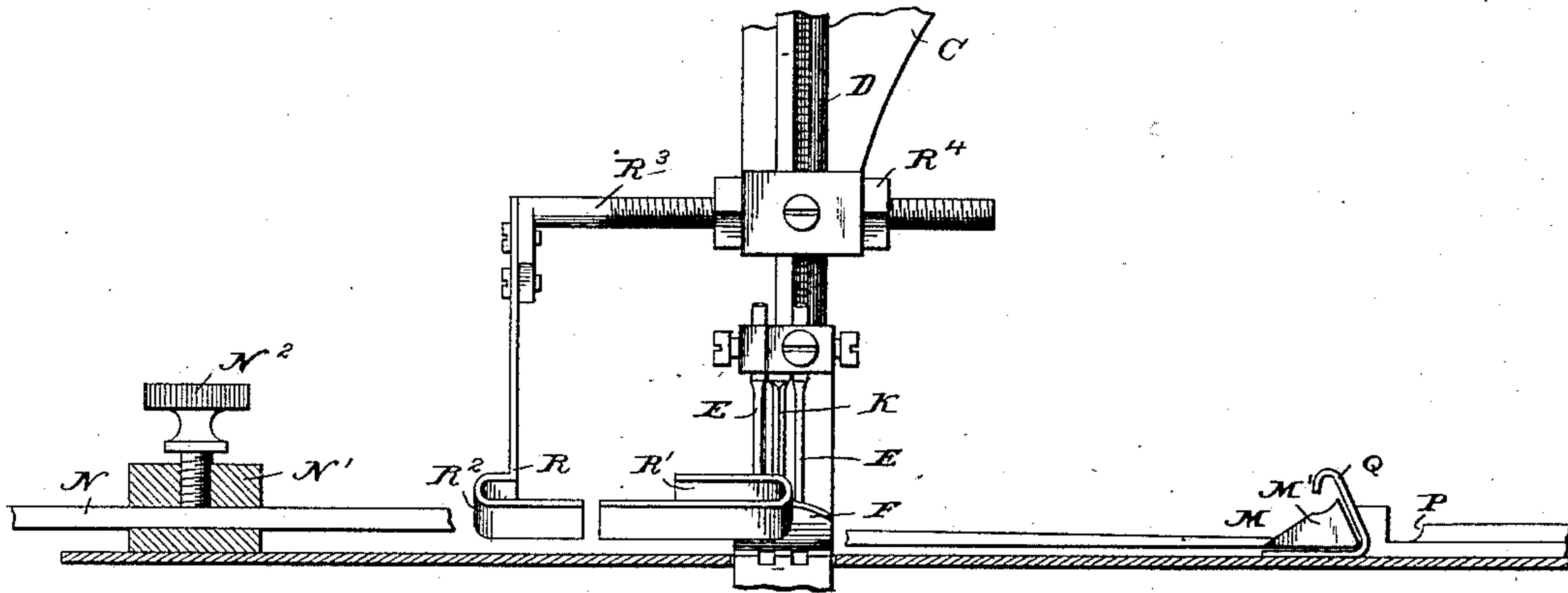
2 Sheets—Sheet 2.

L. ESCHNER  
SEWING MACHINE.

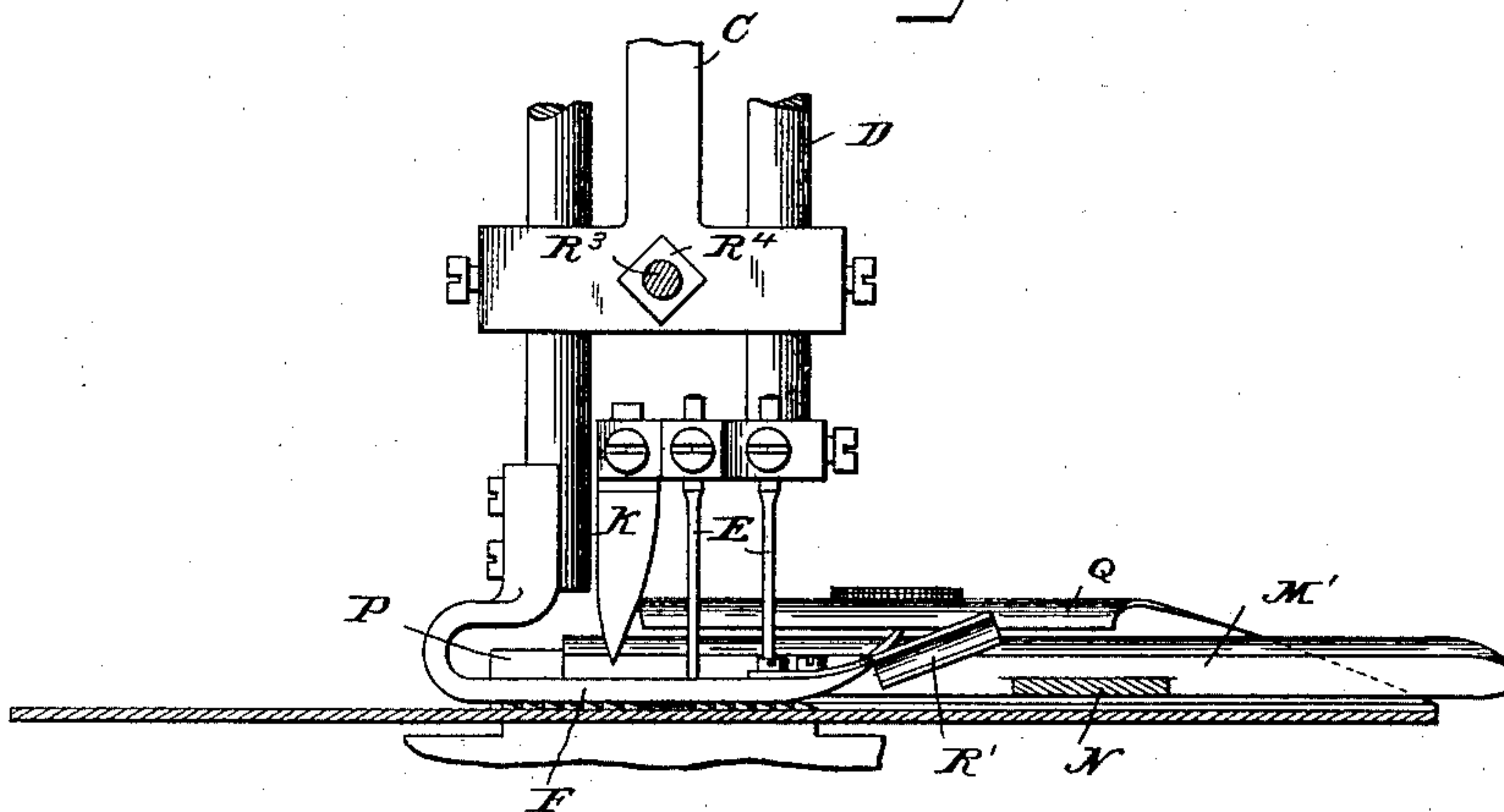
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*Fig. 6.*



*Fig. 7.*



Attest:  
Curt. Cooper,  
George S. Randall

Inventor:  
Louis Eschner,  
J. A. Wiedersheim  
Atty



# UNITED STATES PATENT OFFICE.

LOUIS ESCHNER, OF PHILADELPHIA, PENNSYLVANIA.

## SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 353,487, dated November 30, 1886.

Application filed November 21, 1885. Serial No. 183,486. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS ESCHNER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Sewing-Machines, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a side elevation of a sewing-machine embodying my invention. Fig. 2 represents a horizontal section in line *xx*, Fig. 1. Fig. 3 represents an end view thereof. Figs. 4 and 5 represent perspective views of specimens of work performed by the machine. Fig. 6 is a sectional view of the device on line *zz*, Fig. 2, the presser-foot being lowered. Fig. 7 is a sectional view enlarged, showing the relative arrangement of the cutter, needles, and gage.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a sewing-machine having a cutter or knife attached to the needle-bar and operated thereby, and a gage so constructed that two materials after having been joined by a seam on one side may by the next operation make a second seam, forming a tube, which is severed, leaving a seam on the fabric for the next tube, the edge of said seam serving as a guide therefor. By this improvement strips or pieces of fabric are sewed, held in position, and cut the desired and exact width by one operation, in a more accurate and better manner and in less time, with but little practice, and without liability to have the work fray out.

The invention is especially serviceable for forming the bands, aprons, and other parts of neck-scarfs and similar goods requiring tubes and closed sides.

Referring to the drawings, A represents the driving-shaft of the sewing-machine, and B represents the oscillating arm, which is mounted on the upper portion of the frame C, and operated from said shaft, as well known in sewing-machines. The arm B is connected with the needle-bar D, to which latter are removably secured two needles, E, which, as will be seen, are arranged diagonally to each other.

F represents the presser-foot, the same having throats G for the passage of the diagonally-

arranged needles E, said foot being adapted to be raised and lowered in well-known manner.

To the portion of the frame C below the cloth-plate is mounted a shaft, H, which extends parallel with the shaft A, and carries at one end a pinion, H', and at the other end a pinion, H<sup>2</sup>, the pinion H' meshing with a pinion, A', on the shaft A. The pinion H<sup>2</sup> meshes with a pinion, J, on a shaft, J', the latter being mounted on the frame C above the shaft H, and carrying a looper, J<sup>2</sup>, it being seen that the inner side of the shaft A carries a looper, A<sup>2</sup>, the two loopers facing each other and each operating in relation to one of the diagonally-arranged needles E, the parts being so disposed and timed that two lines of stitches are formed when the machine is in operation.

Connected with the base of the needle bar is a knife or cutter, K, and the presser-foot and the cloth-plate are formed with throats or openings to permit the passage of said knife, it being noticed that the blade is located in a line between the two needles, whereby the fabric that is sewed will be cut through between the two rows of stitches.

When the machine is set in motion and the fabric is fed to the needles, two rows of stitches are formed, and the knife cuts the fabric between the two rows of stitches, thus dividing the same into bauds or strips, sewed along their sides. (See Fig. 4.)

M represents a gage consisting of a head, M', resting upon the cloth-plate, and which is connected with a bar, N, the latter being movably supported at one end above the cloth-plate on a block, N', attached to the end of said plate opposite to the balance-wheel of the machine, said block carrying a screw, N<sup>2</sup>, whereby the bar may be moved so as to adjust the head nearer to or farther from the needles, and adapt the machine for sewing narrow and wide bands or strips.

The head M' is in vertical cross-section of triangular form, so that when a piece of fabric—such as facing—is passed between the guide and guide-bar and the cloth-plate, and another piece is passed—such as lining—over said guide, and the two pieces are fed to the needles, the piece that is below and passed around the bottom and side of the head M' has a fullness imparted to it that causes the sewed pieces to



be well adapted for tubes or puffs. (See Fig. 4.) The head M' is located within an adjustable guide, P, which is somewhat of the form of a channel, the upper end whereof has a flange, Q, which overhangs the top of the head and serves to guide the fabric true through the machine, the sewed edges of the two pieces of fabric resting against the under face of said flange.

In operation, the gage N is adjusted by means of the screw N<sup>2</sup> of the block N' and the guide P, so that the distance of the head M' from the nearest needle is the same as the desired line of sewing from the other edge of the material. When the desired length is sewed, the portion of the material between the head and the cutter is removed therefrom, and the other portion thereof is shifted or moved to the right, so as to occupy the said place, when the operation may be repeated, as desired.

Where it is desired to add a third piece of fabric—such as stiffening—to the two pieces above referred to, (see Fig. 5,) I employ a gage, R, consisting of a loop-shaped piece of metal or other suitable material, located above the bar N, adjacent to the needles. The gage R is divided or formed in sections R' R<sup>2</sup>, the section R' being secured to the presser-foot and the section R<sup>2</sup> being connected with a bent arm, R<sup>3</sup>, the vertical limb whereof is threaded and screwed to the adjacent end of the frame C or the goose-neck, said arm being laterally adjustable and held in position by a jam-nut, R<sup>4</sup>, the adjustment adapting the gage to stiffening or other pieces of various widths.

By the provision of the gages M and R, I am enabled to sew an inner stiffening to face the goods, and linings employed for the ends of bands and other parts of neck-wear and other goods, gaging the two outer materials to the desired equal or unequal proportions, producing superior work at reduced expense of money and time.

When it is desired to sew but a single row of stitches, which may be desirable in starting the work or sewing the first side thereof, one of the needles may be removed or unthreaded and the fabric simply guided to the other needle, which forms a row of stitches.

Referring to Fig. 5, when the pieces of fabric are properly turned the stiffening-piece comes within the facing and lining pieces, and the unsewed edge may then be secured by gumming and hand-sewing, if so desired, the stitches in either case appearing on the back of the resultant band or tube near the edges thereof, and concealed from in front.

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

1. In a sewing-machine, the needles E E, mounted diagonally relative to the feed-plate of the said machine, in combination with a cutter located in the rear of the needles and upon a line passing between the needles in the direction of the line of feed, and means, substantially as described, for operating said needles and cutter, all substantially as and for the purpose set forth.

2. In a sewing-machine, the combination of the needles E E, the cutter K, said needles and cutter being arranged substantially as described, and means to operate the said needles and cutter, with the adjustable gage M, having head M', all substantially as and for the purpose set forth.

3. In a sewing-machine, the needles E E and cutter K, arranged substantially as described, and means to operate the same, in combination with the gage M, having head M' and flanged guide P, all combined substantially as described.

4. In a sewing-machine, the needles E E, the cutter K, means to operate the said needles and cutter, the gage M, having adjustable bar N, and guide P, all combined substantially as and for the purpose set forth.

5. In a sewing-machine, the needles E E and the cutter K, with means to operate the same, the gage M, having bar N, and gage R, the latter located above said bar N, all combined substantially as and for the purpose set forth.

6. In a sewing-machine, the needles E E and the cutter K, with means to operate the same, in combination with the gage M and the gage R, the latter formed of loop-shaped pieces R<sup>2</sup> and bent arm R<sup>3</sup>, the latter having a screw-thread end, all combined substantially as and for the purpose set forth.

7. In a sewing-machine, in combination with the needles thereof and means for operating the same, an adjustable gage adapted to operate on the table of the machine, and a second gage located above the bar of the first-mentioned gage and adjustably connected to the frame of the machine, all substantially as described.

LOUIS ESCHNER.

Witnesses:

JOHN A. WIEDERSHEIM,  
A. P. GRANT.