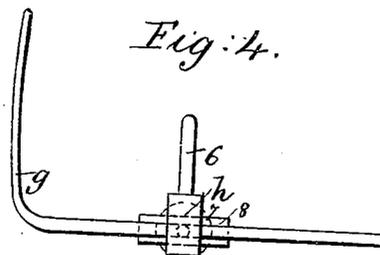
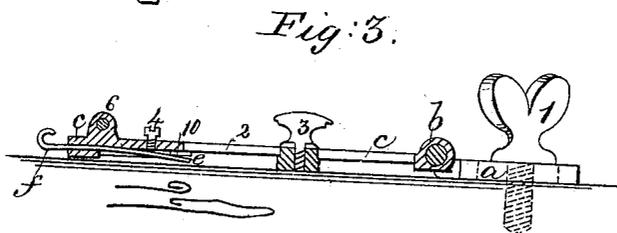
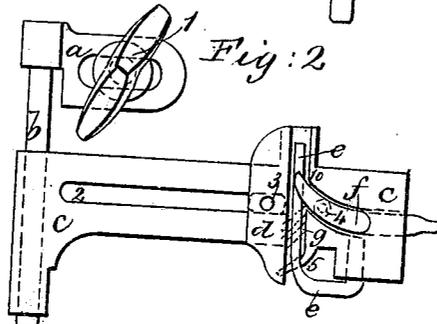
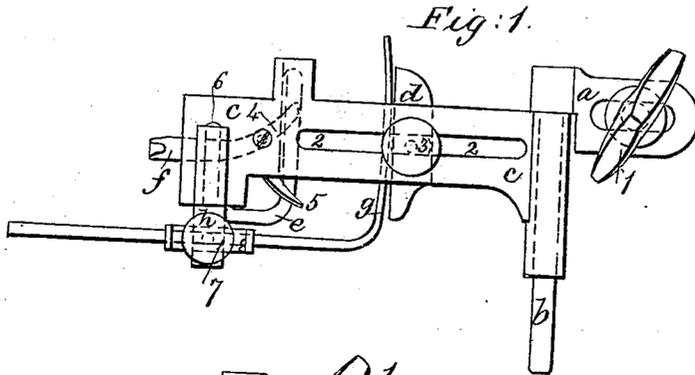


L. W. SERRELL.

Sewing Machine Guide.

No. 26,207.

Patented Nov. 22, 1859.



Witnesses.  
 Chas. Geo. Harold  
 Chas. H. Smith

Inventor.  
 Lemuel W. Serrell



# UNITED STATES PATENT OFFICE.

LEMUEL W. SERRELL, OF BROOKLYN, NEW YORK.

## IMPROVEMENT IN GUIDES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 26,207, dated November 22, 1859.

*To all whom it may concern:*

Be it known that I, LEMUEL W. SERRELL, of Brooklyn, in the county of Kings and State of New York, have invented, made, and applied to use certain new and useful Improvements in Guides for Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is a plan of my improved guide. Fig. 2 is the same turned over to receive the cloth. Fig. 3 is a vertical longitudinal section. Fig. 4 is the hem-spreader. Fig. 5 is a plan of the guide adapted to turn the edge of the cloth under the goods. Fig. 6 is the same instrument adjusted to a narrow width of hem. Fig. 7 is a side view. Fig. 8 is an end view of said hemmer, and Fig. 9 is an inverted plan of the tongue and tucker.

Similar marks of reference denote the same parts.

The present invention is an improvement on that for which Letters Patent were granted to me on the 11th day of May, 1858.

My said invention relates to providing a yielding and adjustable spring-mouth, between which and a plate the goods pass, so that the hemmer is adapted to different thicknesses of goods, and can also pass seams which would obstruct those hemmers or guides that have a fixed mouth, and so that there is not too much pressure on the goods to bind or obstruct their free passage through the guide by the feed of the sewing-machine.

In order to facilitate the introduction of the goods into the "hemmer," I fit such guide onto a pin or its equivalent, whereon it can be drawn back from the needle and pressure-foot of the machine, or can be turned up on such hinge-pin for introducing the goods. With some machines it is important to turn the hem upward onto the surface of the cloth. With others—such as a chain-stitch sewing-machine—it is desired to turn the hem under the cloth. I have therefore shown this hem-guide in the two forms adapted to these purposes, the one being the same as the other, only inverted and fitted so as to be attached onto the plate.

I will proceed to describe the guide shown in Figs. 1, 2, 3, and 4, which turns the hem above the cloth.

*a* is a plate or arm attached to the bed of the

machine by a screw, 1, or extended to the fixed arm of the machine or attached in any convenient manner, according to circumstances.

*b* is the hinge-pin, extending from the arm or plate *a* at such a level from the bed of the sewing-machine that the hemmer *c* will set properly thereon. In this hemmer *c* is a slot, 2, in which the gage *d* is steadied and slides, and is clamped at any point by the screw 3.

*e* is a tongue formed of a U shape, so that one leg slides into a mortise in *c*. The other leg lies in a raceway formed by a projection, 10, on the under side of *c*. At this point diagonal grooves 9 are formed in the under side of *c*, running toward the angle 10 in such a manner that the edge of the cloth, as it passes between *e* and *c*, tends to make the goods run in with a wider edge for turning over, thus compensating for the force acting against this edge to fold it over the tongue *e*, and also acting to stretch the edge of the cloth widthwise and compensate for the stretching of the edge of the materials lengthwise, which always occurs in tearing the cloth.

In order to facilitate entering the cloth between *c* and *e*, I provide a horn, 5, extending from the projecting angle 10 in a diagonal and twisted form, that not only smooths the cloth in passing between the tongue and plate, but acts in aid of the grooves 9 to keep the edge into the hemmer.

*f* is a tucker passing through a mortise in *c*, and extending in an open recess in 10 to the tongue *e*. This tucker is made of thin steel, or other material that will easily spring nearer to or farther from the plate *c*; and 4 is a regulating-screw acting, as seen in Fig. 5, to retain the point of this tucker at a greater or less distance from the plate *c*; and thereby form a mouth of the necessary width for the goods to run through easily, and at the same time the spring of the tucker allows any extra thickness to pass through easily. The tucker *f*, at the inner end, requires to be diagonal to the tongue *e*, and for this purpose may be a straight spring in a diagonal position, or a curved end, as shown, and an offset or stop may be provided to prevent the tucker drawing entirely out.

The tongue *e* can be drawn out and a narrower or wider one inserted. I usually provide two tongues for each hemmer—one narrow for thin work, the other wider and stiffer for heavy goods.

Upon reference to Fig. 2 it will be under-

stood that in running a narrow hem, or one the width of the tongue *e*, the gage *d* must be sufficiently close to *e* to keep the goods to place, but at the same time allow the goods to pass freely on each side of *e*. I enter the edge of the cloth between the tongue *e* and horn 5, draw back *f*, if desired, pass the goods through sufficiently for the feed of the machine to take hold, crease the edge of the cloth over tongue *e* at angle 10, leaving the amount desired to be folded in of the edge at the hem, slide in tucker *f*, that holds this edge down, (and in the hemming tucks the edge of the cloth in under the tongue *e*,) turn the hemmer over onto the bed, the operation of which forms the second fold in the cloth. The goods now run through the guide in the relative position shown by the lines under Fig. 3, care being taken to guide the edge of the cloth by hand properly under the horn 5, and with wide hems to have the ends of the hem square and even upon starting.

In order to form a wide hem, I introduce the spreader *g*, that is mounted in a stock, *h*, beneath a gage, 8, and held by a screw, 7; and 6 a pin on the stock *h*. When this spreader is to be used, I insert the pin 6 in a hole in the hemmer *c*, provided for this purpose, loosen the screw 7, slide the spreader along to form the desired width of hem between the tongue *e* and spreader *g*, and slide gage 8 along so that the end shows where the operator is to keep the edge of the goods, slide *d* along to near *g* and clamp it, allowing sufficient room for the goods to pass freely. (See Fig. 1.) In entering the goods for wide hems, the hemmer *c* is drawn back, turned over, and the spreader *g* turned up on the pin 6 out of the way, and when the edge of the cloth has been entered the same as for narrow hems turn down spreader *g*, turn over *c*, and proceed with the sewing.

From the foregoing description the operation of the hemmer, Figs. 5, 6, 7, 8, and 9, will be apparent, the same letters being on the corresponding parts.

The plate *a*, for convenience, is formed thinner; and *b* is the part on which the hemmer can be drawn back for convenience of entering the goods. The tongue *e* and tucker *f* are formed together, and the spring attaching them is folded, as in Fig. 9, and passes under the plate *c*, where it is attached by slots and screws 12, so that the width between the tongue *e* and the turning-scroll *o* may be adjusted according to the thickness of cloth; but the parts will spring for any unusual thickness. When the hem is turned under the cloth, great necessity exists for keeping the edge of the cloth into the hemmer, because the operator cannot see to guide it; hence I form diagonal grooves on the under side of the tongue *e*, as well as on the upper side of *c*; and *i* is an adjustable gage, beneath which the edge of the cloth is guided, and the proper amount allowed to pass into the hemmer. The screw 4 regulates the pressure of tucker *f* and also the tongue *e* on the goods.

The swell *o* lifts and commences to turn the edge, and the tucker *f* completes the operation by passing the edge between the tongue and the goods that are over the same. The hem-spreader *g* passes beneath lips 11 11, that confine it and allow of its being slid to any desired position, according to the width of hem. This gage *d* is confined by a tongue and cross-pin under the slot 2, and the screw 3 is at the end thereof, to be out of the way of the goods. *k* is a smoother on the screw 13, that, when the goods have been properly entered, is turned around into the position shown by dotted lines in Fig. 5 against the stop 14, and acts to keep the upper surface of the goods smooth in forming wide hems. In all instances the projection or angle 10 guides the folded edge of the hem to as near the needle as possible, and the slots in the plates *a* allow for adjustment, so as to perform the stitching as near the edge of the hem as possible. The gage *d* also answers as an ordinary guide for the width of a tuck or fold; and my hemmer or guide can be used for felling as well as for hemming. These hemmers are to be made in the form shown, to feed away from the operator, with the hem either on the right or left edge of the cloth; and by reversing the position of the parts or forming the hemmer "handed," the guide may be adapted to pass the goods either from the left to the right or the right to the left. The hemmer, when not in use, can be slid off pin or tongue *b*.

Having thus described my said invention, I wish it to be understood that I do not herein claim, broadly, regulating the width of hem by a spreader and gage, both of which are adjustable or variable, the same being in the aforesaid patent; neither do I herein claim the independent tongue *e*.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A spring-tucker acting to fold the edge of the hem against the plate of the hemmer, when combined with the adjusting-screw 4 or its equivalent, whereby the pressure of the tucker on the goods and the opening or mouth left for their passage are regulated, as set forth.

2. The horn 5, in combination with the tongue *e*, for the purposes and as specified.

3. The arrangement of the hem-spreader stock *h* and gage *d*, for the purposes and as specified.

4. Attaching the guide or hemmer to the sewing-machine by a cylindrical pin or hinge to permit the said guide or hemmer to be turned up or inverted, so that the edge of the cloth at the beginning of hem can be properly entered and folded while in this position, as set forth.

In witness whereof I have hereunto set my signature this 16th day of June, 1859.

LEMUEL W. SERRELL.

Witnesses:

THOS. GEO. HAROLD,  
CHAS. H. SMITH.