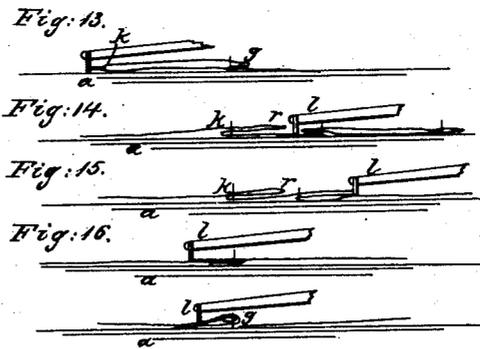
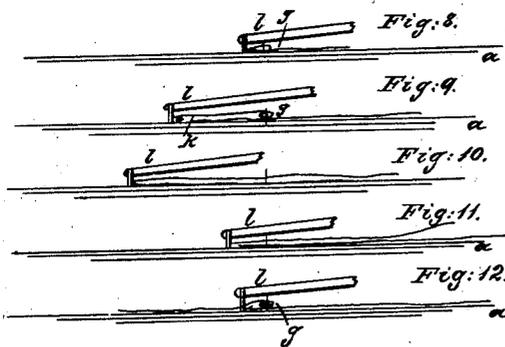
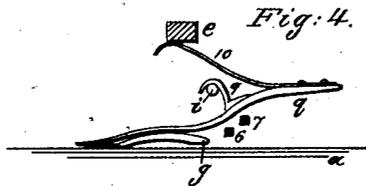
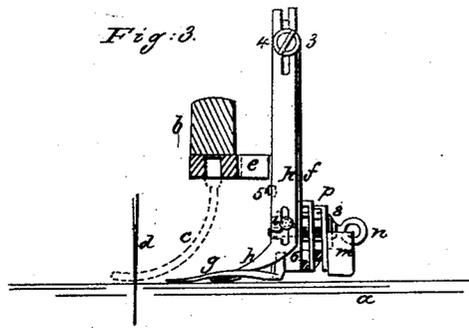


L. W. SERRELL.
Sewing Machine Guide.

No. 20,245.

Patented May 11, 1858



Witnesses:

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IMPROVEMENT IN GUIDES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 20,245, dated May 11, 1858.

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 Means for Guiding Cloth to 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 apparatus complete. Fig. 2 is a side view of the same; and Fig. 3 is an end view with a portion of the gage and hem-spreader removed to show the other parts. The other figures are separately referred to, and similar marks of reference denote the same parts in all the figures.

In hemming cloth, felling seams, running tucks, and stitching various articles a necessity has heretofore existed for some device that might be applied to any sewing-machine which would guide the cloth with certainty and be capable of speedy change from one kind of work to another. The object of my said invention has therefore been to provide such means for guiding the cloth to the sewing-machine that any character of work could be performed by a combination or permutation of guides that control the position of the cloth relatively with the needle, and at the same time keep the goods as nearly flat as possible, and open to the inspection of the operator, and also turn the hems or operate on the cloth in a manner resembling as nearly as possible the ordinary operation by hand.

In the drawings, *a* represents the bed of any sewing-machine. *b* is the arm, carrying the pressure-pad *c* and needle *d*. These parts are only introduced herein to illustrate the manner of applying this apparatus, and the arm *b* may represent any portion of a sewing-machine, to which the arm *e* from my guide might be attached by a screw, *x*, and slot, or otherwise.

f is a stock attached to the arm *e*, to which my guides are attached.

g is a thin tongue on the end of and at right angles to the arm of the tongue, which arm passes into the stock *f*, and may be retained therein by the hook *l* on the center screw, 2, which turns down into a chase or notch around

the end of said arm. The tongue *g* is beveled off on its under side near the middle, at which point the "tucker" *h* operates. This tucker *h* is formed as a twisted incline, and operates to force down the edge of any cloth and tuck it under the tongue *g*. This tucker *h* is extended up as a spring and attached by a screw, 3, to the stock *f*, said screw passing through a slot in the spring and also through a beveled washer, 4, by which means the tucker *h* can be adjusted vertically and the points thereof thrown more or less distance across under the tongue *g*.

i is a screw passing through a slot in the tucker *h* into the stock *f*, to prevent the spring forcing the tucker too close to the tongue *g*; and 5 is a small spring-catch, or its equivalent, to hold the tucker back when sprung away from the tongue *g* for the insertion of the cloth. The operation of this part is that the cloth is slid under the tongue *g* and tucker *h*, and the edge turned over by hand and then tucked under said tongue by the tucker *h*, and the cloth is fed along to the needle *d* by any competent means in the direction of the arrow, Fig. 1, and the cloth being guided by the fingers, a hem is formed of a width corresponding with the tongue *g*, (see Fig. 8,) and the sewing is near to the edge or farther therefrom, as the whole apparatus is adjusted at the screw *x* and slot. It will be apparent that the inclined twisted tucker *h* first carries the edge of the cloth down and then across under the tongue *g* in a manner corresponding to the well-known "striking down" of a hem or fell with the ordinary sewing-needle while held in an inclined position by the sewer.

By making use of the gage *l* to keep the cloth to the tongue *g* and using a small pressure-finger, *q*, (see Fig. 4,) over the tongue *g* to keep down the cloth, the same will run through the machine with scarcely any guidance by the operator. 10 is the spring of this finger *q*, and 9 is a small hook over the screw *i* to keep the same in place, and by forming a point or points, 11, (see plan, Fig. 5,) at the end of this finger *q*, the cloth can be forced along under the tongue in entering the same into the machine. The gage *l* is retained in place by a bar, 7, between the clamping-plates *p*, as is also the bar 6 of the hem-spreader *k*. The clamping-plates *p* are attached by pins 8 and a screw, *n*, which

screw *n* also retains the gage *m*, which serves to indicate the point to which the edge of the cloth is to be turned back over the part *o* to leave the necessary amount to tuck under the tongue *g* in forming the hem.

The use of the hem-spreader *k* will be apparent on reference to Fig. 9. It gages the distance from the tongue *g* and spreads the hem to any point to which it may be adjusted, and by that means any desired width of hem can be stitched with unerring accuracy.

In Figs 8 to 17 the blue lines show the cloth and the red lines the point of stitching with the needle and thread or threads. Fig. 10 shows the gage *l* in use for running tucks in a manner similar to the ordinary gage on sewing-machine beds. Fig. 11 shows the same gage as applied to the uniting two edges of cloth prior to running the same through a second time, as seen in Fig. 12, to form a "fell." In this case the tongue *g* and tucker *h* turn the edge under, and the gage *l* or hem-spreader *k* determine the width of the fell or flat seam. Figs. 13 to 15 show the manner of stitching shirt-bosoms. In this case the "box-plait" is formed on the edge the same as the hem, Fig. 9, the stitching being farther from the edge, and then the second row of stitching is formed by adjusting the gage *l* similar to the operation shown in Fig. 10. The material is then turned end for end, passed beneath the spreader *k* with the box-plait against the gage *l*, (see Fig. 14,) and a second spreader, *r*, Figs. 6 and 7, attached to the bed *a* at 12, gages the width of the plait, and so on the plaits are stitched. (See Fig. 15.) In these two figures, 14 and 15, the stock *f* is drawn toward the operator on the slot and screw *x* sufficiently for the adjustment of the parts. Figs. 16 and 17 show the manner of stitching coat-seams on cloth, which will be apparent without further description.

Having thus described the nature and opera-

tion of my said invention, I would remark that the further details of the manner of using the same will be apparent to the operator and need not be specified.

I do not claim a bent or curved piece of metal into which the edge of the cloth is turned or folded in forming a hem; but I do not know of any previous instance in which a separate tongue has been made use of, around which the material to be hemmed has been wrapped or folded, as specified, whereby said tongue is free to accommodate different thicknesses of cloth at the same time that it determines the position of the edge of the fold and allows more or less of the edge of the cloth to be tucked beneath said tongue.

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

1. The detached tongue *g*, around which the edge of the cloth to be hemmed is folded or wrapped to a greater or less extent, substantially as and for the purposes specified.

2. The adjustable hem-spreader *k*, in combination with the tongue *g*, substantially as specified.

3. The combination of the separate or detached tongue *g* with the inclined tucker *h*, to pass the edge of the cloth beneath the said tongue *g* between that and the material on the bed, to form the hem, substantially as specified.

4. The finger *q*, in combination with the tongue *g*, substantially as and for the purposes specified.

5. The gage *r*, in combination with the hem-spreader *k* and gage *l*, substantially as and for the purposes specified.

In witness whereof I have hereunto set my signature this 27th day of February, 1858.

LEMUEL W. SERRELL.

Witnesses:

THOMAS G. HAROLD,

WILLFORD H. NETTLETON.