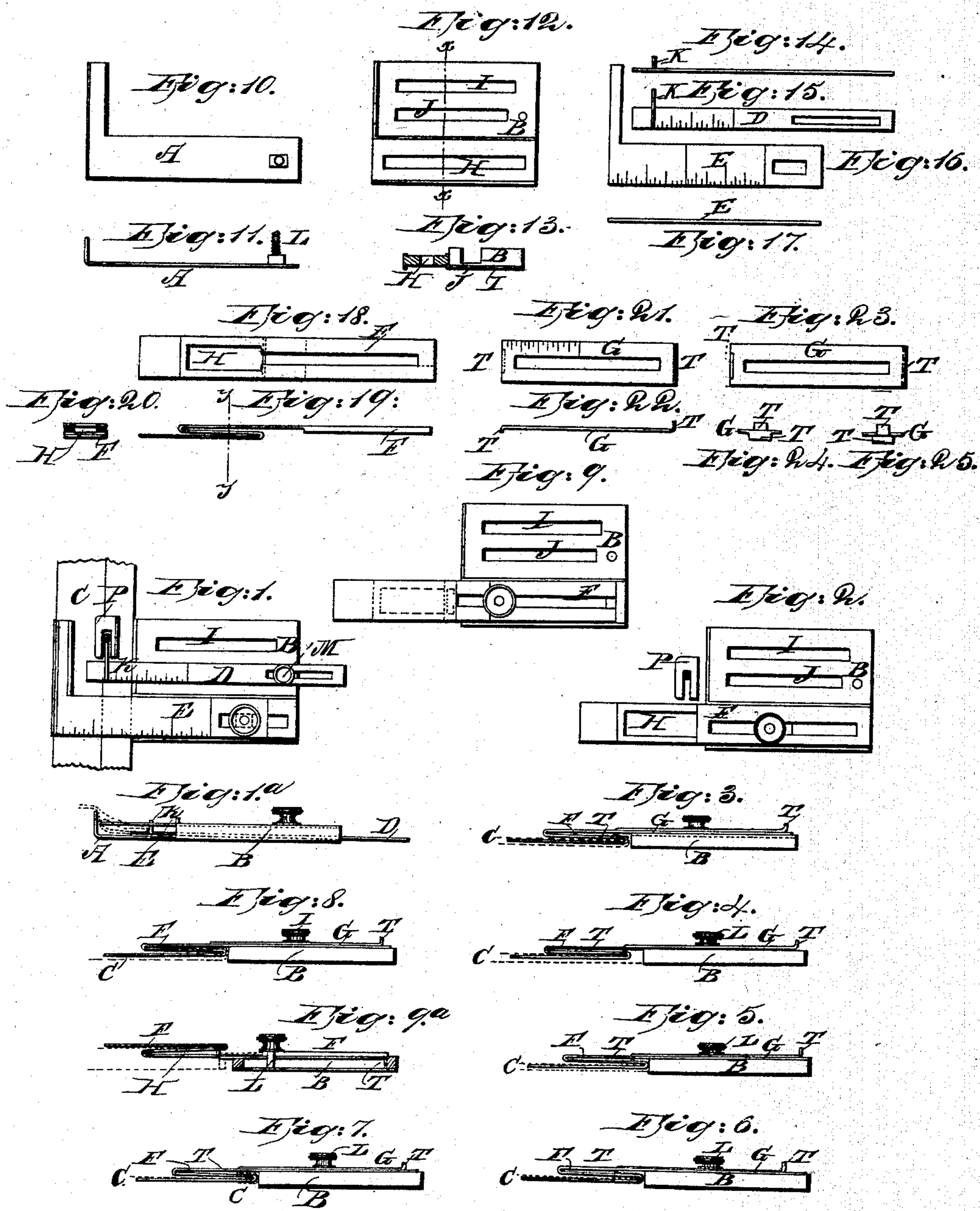


M. A. DUFFY.
Sewing Machine Gage.

No. 59,983.

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Witnesses:
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IMPROVEMENT IN SEWING-MACHINE GAGE FOR TUCKING, FELLING, BINDING, &c.

Specification forming part of Letters Patent No. 59,983, dated November 27, 1866.

To all whom it may concern:

Be it known that I, MARY A. DUFFY, of the city, county, and State of New York, have invented a new and Improved Extension Tucking, Binding, Felling, Hemming, and Overhand-Seaming Gage; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, and the letters of reference marked thereon, in which the same letter represents the same thing in each figure.

Figure 1 is a top view of my improved gage, showing its arrangement when used for tucking; Fig. 1^a, a side elevation, showing the folds of the cloth; Fig. 2, a top view, showing its arrangement when used for binding, felling, or hemming; Fig. 3, a side view when used for felling; Fig. 4, a side view when used with a shuttle-machine, or preparatory for shuttle-machine hemmers to turn the fell; Fig. 5, a side view when used for plain seaming and as a substitute for basting; Fig. 6, a side view when used for plain or flat binding or ordinary trimming; Fig. 7, a side view when used for edge-binding or securing a binding on both sides of an edge of cloth; Fig. 8, a side view when used for hemming; Fig. 9, a top view with plates reversed for overhand-seaming; Fig. 9^a, a longitudinal section, showing the relative position of the parts in overhand-seaming; Fig. 10, a top view of the tucking-plate; Fig. 11, a side view of the same; Fig. 12, a top view of the plate and gage-holder; Fig. 13, a cross-section of the same through *x x*; Fig. 14, a side view of the tucking-gage; Fig. 15, a top view of the same; Fig. 16, a top view of the guide-plate; Fig. 17, a side view of the same; Fig. 18, a top view of the hemming, binding, and felling plate; Fig. 19, a side view of the same; Fig. 20, a cross-section thereof through *y y*; Fig. 21, a top view of the hemming, felling, and binding guide; Fig. 22, a side view of the same; Fig. 23, a bottom view of the same; Figs. 24 and 25, end views of the same.

A represents the tucking-plate; B, the plate and gage holder; C, the cloth; D, the tucking-gage; E, the folding-plate; F, the hemming, binding, and felling plate; G, the hemming, binding, and felling guide; H H, the

slots in plate-holder B and hemming-plate F, to accommodate tongue T and set-screw L; I, the slot by which plate-holder B is secured to the machine in tucking; J, the slot by which it is secured when the gage is used for all other seams; K, the stop of tucking-gage D, which prevents the turned cloth from coming too far and getting under the needle; L, the adjusting set-screw; M, the set-screw for tucking-gage D; P, the slotted presser-foot of a sewing-machine, through which the needle descends; T T, the tongues of folding-guide G.

The nature of my improvement consists in making an adjustable gage for sewing-machines of such parts and pieces so adapted and fitted to each other that by different arrangements thereof the several operations of tucking, binding, felling, hemming, and overhand-seaming may all be performed thereby, and a second tuck may be turned and creased while the previous tuck is being stitched, and work prepared for a fell without basting or leaving any waste cloth to be cut off.

I will now describe the modes of operation by which these results are severally attained.

To tuck, secure plate and gage holder B to the sewing-machine by the usual set-screw thereof through slot I, having previously placed tucking-plate A beneath holder B, with its screw coming through, and screw-head sliding in groove H, set in or out, as a wide or narrow space between the tucks or wide or narrow tucking is desired. Place folding-plate F in the groove of plate-holder B, over slot H, its extremity the thickness of the cloth distant from the extremity of tucking-plate A. Place tucking-gage D over slot J, its stop K in the slot of presser-foot P of the sewing-machine. Secure tucking-plate A and folding-plate E in place by adjusting set-screw L, and tucking-gage D by its set-screw M. Fold the cloth about twice the width of the tucks desired, adding cloth enough to space between the tucks, if there is to be a space, and pass it between the inner and outer extremities of tucking-plate A and folding-plate E, and up to the end of plate-holder B. Fold the cloth over the extremity of folding-plate E, and up to stop K of tucking-gage D, and under cloth presser-foot P. Starting the machine, the cloth so folded is sewed through the fold first

mentioned, and folded down for the next tuck by plate E, and creased and marked by presser-foot P in the line of stop K. Continue the operation by placing the second tuck so creased, as first explained, and bringing over another fold. If it is desired to tuck without folding and preparing the second tuck, dispense with tucking-plate A and folding-plate E.

To bind, secure plate-holder B to the machine, as before explained, but through slot J, tucking-plate A being placed beneath it, as before, but in a reversed position, or the other end to it being used now, not as a tucker at all, but only to get its securing-screw in position for adjusting set-screw L. Place plate F upon it, and guide G upon that, one of its tongues, T, being the width of the binding from the end of plate-holder B, which will keep it on a line with the edge of the cloth beneath felling-plate F.

To trim or sew on a binding away from the edge of the cloth, increase the space between the tongue T, which is always to be on a line with the needle, and the end of plate-holder B, up to which the cloth is to come.

To bind on the edge or sew the binding on both sides of cloth, move guide G up until its tongue T is half the width of the binding from the end of plate-holder B, and turn the binding (see Fig. 7) around the inner curve of felling-plate F, the cloth to be bound being between.

To fell, the parts are arranged as last described for binding upon the edge. One piece of cloth is brought in, as was the binding in that case, and the other piece of cloth as was the cloth in that case. (See Fig. 3.) To fell with a shuttle-machine, which turns the fell by a hemmer, and for which my device is of use to prepare the fell, bring one edge of one piece of cloth to the line of plate-holder B, and felling-plate F being extended the width of the desired fell, the other piece of cloth is inserted in the lower space of felling-plate F, and the fell is prepared for completion in the ordinary way of turning down and sewing it in place. The gage is now a substitute for basting, as

the inner curve of felling-plate F keeps one piece of cloth in place, and holding-plate B the other. (See Fig. 4.)

For plain seaming or sewing the edges of two pieces of cloth together, bring the inner curve of felling-plate F, as shown in Fig. 5, close to holding-plate B, and place the cloth as last above described, bringing the two edges upon the line of sewing.

To hem, move felling-plate F out from holding-plate B, (see Fig. 8,) as in felling, enough for the cloth to pass between its inner curve and plate B. Extend hemming-guide G the width of the hem. The inner curve of felling-plate F will turn the cloth, and tongue T makes the second turn by the cloth bearing against it, and thereby being turned under.

For overhand-seaming, place guide G upon plate-holder B, (see Figs. 9 and 9^a,) bottom up, and felling-plate F upon that, bottom up. Secure by set-screw L. Place one piece of cloth under the inner curve of plate F, so placed, and against tongue T of guide G, so placed. Bring the other piece of cloth in the upper recess of plate F, which will bring the edges of the two pieces one above the other. The lower red lines represent the cloth as it leaves the gage.

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

1. The several devices of plate-holder B, tucking-plate A, folding-plate E, and tucking-gage D, or their equivalents, in combination with the presser-foot of a sewing-machine, for the purpose of folding and marking or creasing a tuck, substantially as explained.

2. The combination of plate-holder B, tucking-plate A, felling-plate F, and felling-guide G, or their equivalents, constructed and operating together substantially as and for the various purposes described.

3. The combination of plate-holder B with felling-plate F, constructed substantially as and for the purposes described.

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