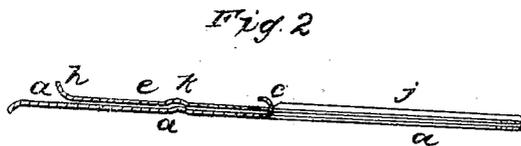
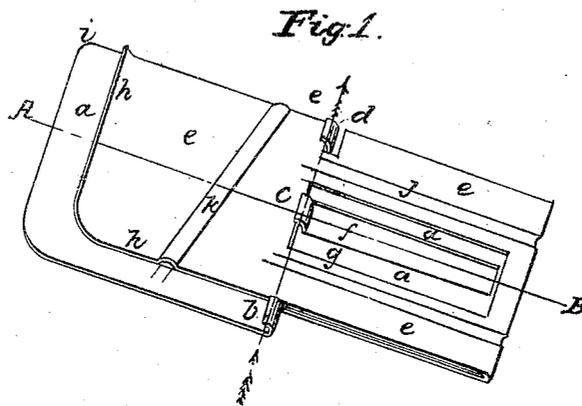


No. 31,366.

PATENTED FEB. 12, 1861.

D. BARNUM.
GUIDE FOR SEWING MACHINES.



Witnesses
of Barnum
E. J. Barnum

Inventor
Daniel Barnum

UNITED STATES PATENT OFFICE.

DANIEL BARNUM, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN GUIDES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 31,366, dated February 12, 1861.

To all whom it may concern:

Be it known that I, DANIEL BARNUM, of Jersey City, in the State of New Jersey, have invented new and useful improvements in manufacturing sewing-gages for sewing tucks, hems, and other seams; and I do hereby declare the following to be a full and clear description of the same, reference being had to the accompanying drawings, and to the letters of reference on the same, which form part of this specification.

Figure 1 is a perspective plan view, exhibiting the various parts; and Fig. 2 is a section through the line A B.

It is well known that in sewing light and fragile textures and fine goods with the ordinary sewing-gage it requires great care even with skillful operators to prevent the material from crimping or doubling up against the gage, and thus to secure straight and even widths of seams; and more especially is this the case in sewing tucks in fine undressed muslins and silks and other soft fabrics. My improvements are intended to obviate this difficulty and to enable ladies of limited experience to use the sewing-machine with satisfactory results to themselves.

The nature of my invention consists in the use of thin elastic sheet metal for making entire double-spring clamping-gages, with elastic clamping, &c., for preventing light flexible materials from crimping or doubling up against the gage, and for sewing tucks, hems, and straight seams on sewing-machines, in combination with cutting out the fastening-slot and gaging-lips from the under spring and the enlarged or relief slot from the upper spring, and turning up from the under clamping-spring the gaging-lips, and leaving both the under and upper springs extending out beyond the gaging-lips to form upper and under elastic clamping-surfaces, between which the material to be sewed is gently pressed and kept smooth without interfering with the feed while passing the material to the needle to be sewed; and it consists, also, in the use of the said elastic thin sheet metal for making elastic clamping-surfaces outside of the gages, as specified, in combination with pressing or stamping male and female corrugations in both under and upper springs to graduate their strength in various parts as well as across their clamping-surfaces outside of the gage in a diagonal

direction, so as to form diagonal clamps which are elastic and yielding to inequalities, while at the same time they exert a gentle pressure upon and incline the material against the gaging-lips, and thus secure straight seams and smooth surfaces in the tucks and hems automatically. My improvements therefore enable me to cheapen the cost of manufacturing sewing-gages, and at the same time to facilitate the operations of the inexperienced learners in acquiring practical success in using sewing-machines, as well as of expert operators.

To enable others to make and use my invention, I refer to the drawings, and to the letters of reference thereon, which make part of this specification.

Figure 1 is a perspective plan view, and it shows all the various parts to be constructed from one piece of elastic thin sheet metal, with the gaging-lips cut out from the under side or lower spring-clamp, with the fastening and adjusting slot, surrounded by an enlarged slot in the upper clamp-spring, this enlarged slot being designed to give entire freedom to the upper spring by working around the fastening-screw.

a is the under clamping-spring, forming the bed-piece of the gage.

b, *c*, and *d* represent three gaging-lips, cut out and turned up from *a* through slots cut in *e*, so as to form gages for the material to run against, as well as stops to prevent *e* from opening far enough from *a* to bend the metal of the springs. I sometimes make but two of these gaging-lips, as the number is not very material.

f is the fastening and adjusting slot in *a*, and *g* the enlarged slot in *e*.

h shows the front edge of the upper spring-clamp turned up, which strengthens the spring and presents a beveled surface to the advancing material for facilitating the entrance of unequal surfaces into or between the clamps, and for this purpose, also, the projecting portions of *a* are deflected downward from the gaging-lip *b* around to the corner *i*, and thus presenting reverse bevel-surfaces, forming incline planes, between which the material finds an easy entrance within the spring-clamps.

j shows a male and female corrugation in both *a* and *e*. These serve to give strength to the springs, and enable me to use very thin sheet metal, and by that means to secure the

utmost delicacy of pressure and of elasticity, a point necessary to the success of the improvement, but which is not attainable with thick metal.

At *k* is seen a male and female diagonal corrugation, stamped or pressed into and across both the upper and under clamping-spring surfaces, which, in combination with the gaging-lips and thin elastic sheet metal, constitutes male and female diagonal clamping spring-gages for sewing straight seams, tucks, or hems. The corrugations should be stamped up from the under side of *a*. This will leave a level surface on the under side, so as to fit the machine, and at the same time the upper side may be beautified with beads formed by the corrugations. The diagonal male and female corrugation should be made within an angle of forty-five degrees with the line of the gaging-lips. This angle may be varied without materially changing the result.

It will of course be understood that the material is to be fed into the clamping-surfaces through the inclined planes, when the male and female diagonal sliding clamps will incline the same automatically toward the gaging-lips and deliver the portion to be sewed to the needle correctly, the gage being so placed that the needle or pressure pad comes just up to the delivery side of the gage, (seen at *l*.)

Having thus fully described the nature and operation of my invention, and pointed out

some of the modifications which may be adopted in constructing the same, I remark that I do not claim to have invented diagonal clamps operated by springs; nor do I claim the use of thin elastic sheet metal, except as particularly specified, and in the manner and combinations specified; but

What I do claim as my invention in the construction of elastic and flexible sheet-metal sewing-gages for sewing tucks and other seams, and which I desire to secure by Letters Patent of the United States, is—

1. In gages for sewing tucks and seams, the combination of the following elements or features as follows, to wit: first, thin elastic and flexible sheet-metal under and upper clamping-surfaces, *a* and *e*, outside of a gage, as specified; second, a gage turned up from or attached to the under spring-plate, *a*, forming a base to the clamping-surfaces *a* and *e* at the line *b c d*, as specified; third, the upward deflection of the edge *h* of the upper clamping-surface, *e*, as set forth.

2. In combination with the combination first claimed, male and female corrugations or grooves *k*, struck up in and diagonally across both under and upper clamping-surfaces, *a* and *e*, as and for the purposes specified.

DANIEL BARNUM.

Witnesses:

O. S. BARNUM.

ED. B. BARNUM.