2 Sheets—Sheet 1.

E. S. YENTZER.

Attachment for Sewing Machines.

No. 113,610.

Patented April 11, 1871.

Fig. 1.

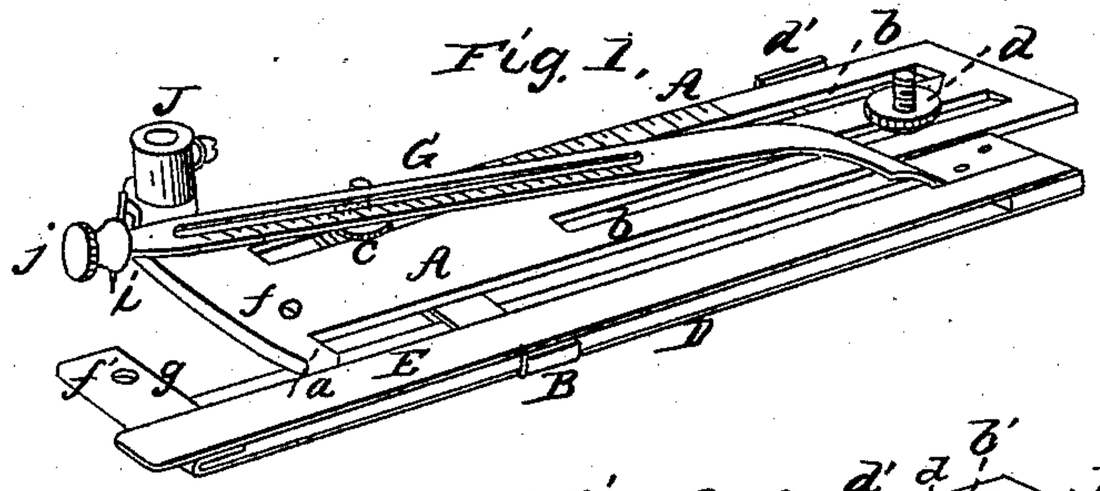


Fig. 2.

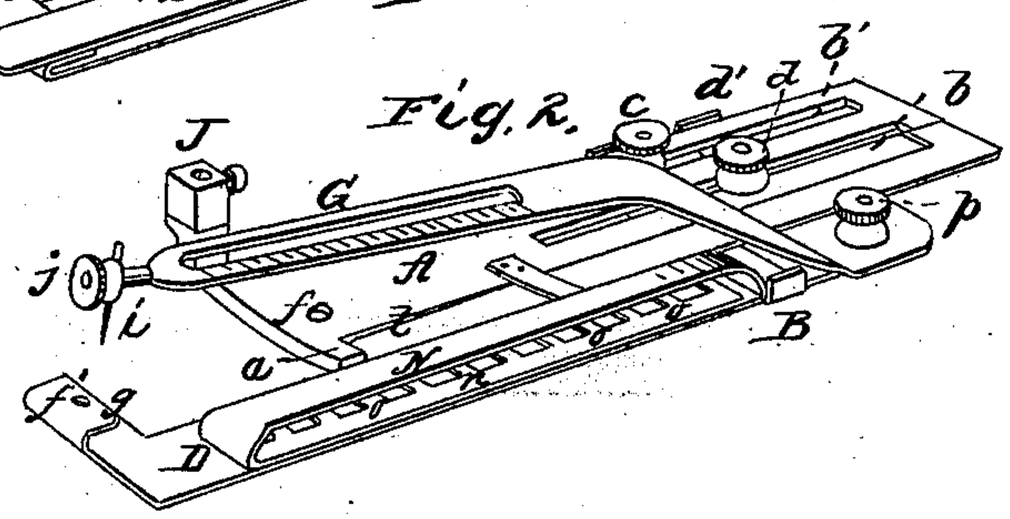


Fig. 3.

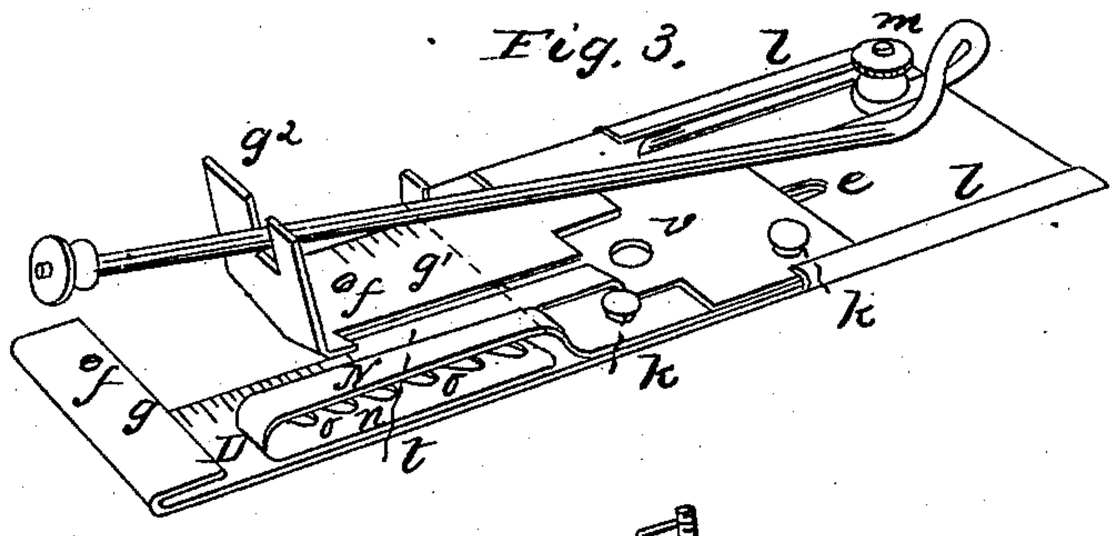
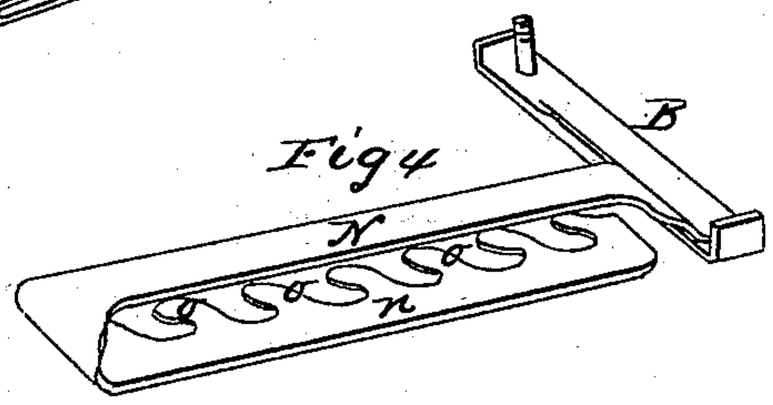


Fig 4



Witnesses:

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by

Mason & Fenwick & Lawrence.

2 Sheets—Sheet 2.

E. S. YENTZER.

Attachment for Sewing Machines.

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Patented April 11, 1871.

Fig. 5.

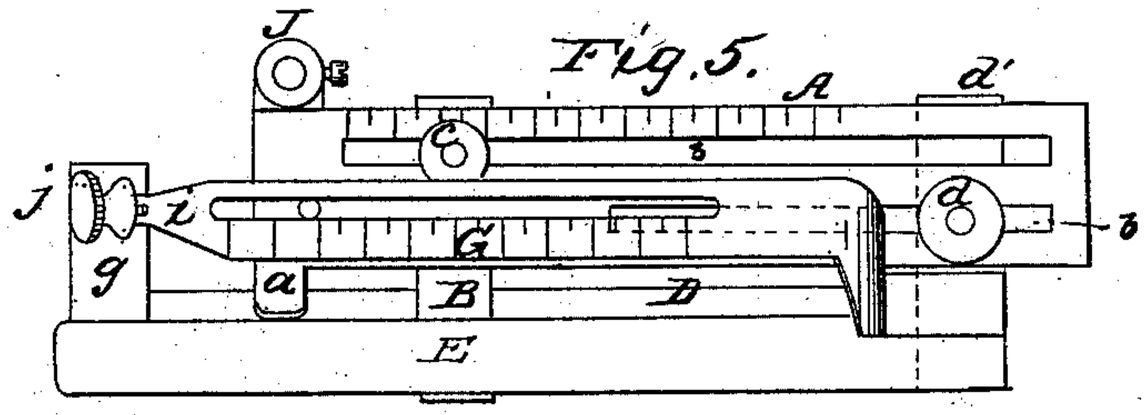


Fig. 6.

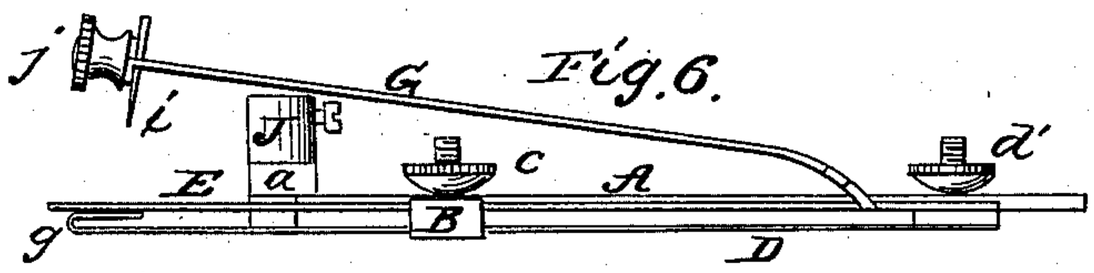


Fig. 7.

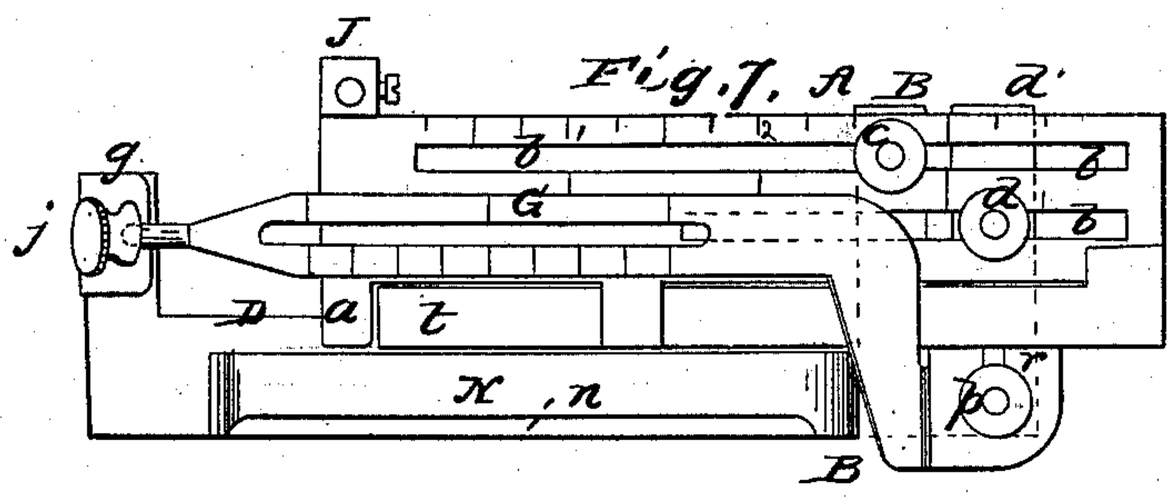


Fig. 8.

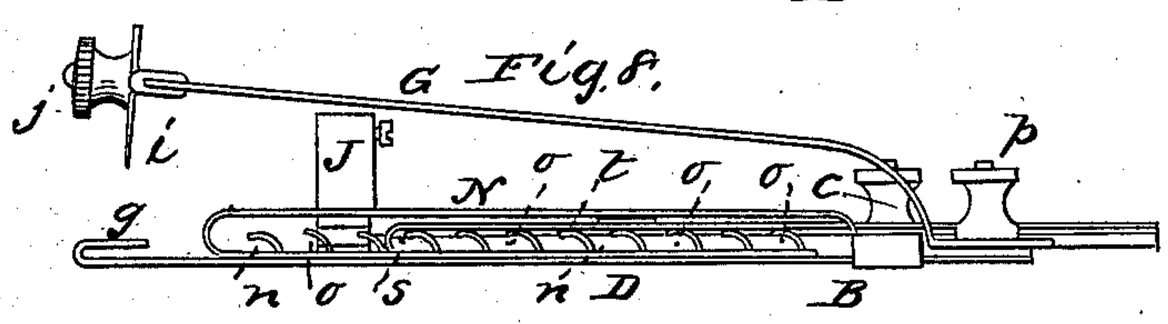
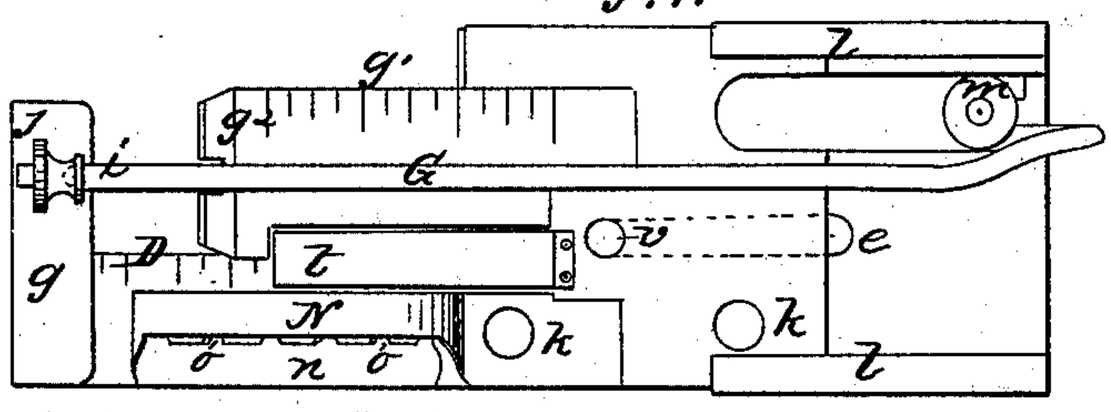


Fig. 9.



Witnesses:
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UNITED STATES PATENT OFFICE.

ENOCH S. YENTZER, OF OTTAWA, ILLINOIS.

IMPROVEMENT IN ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **113,610**, dated April 11, 1871.

To all whom it may concern:

Be it known that I, ENOCH S. YENTZER, of Ottawa, in the county of La Salle and State of Illinois, have invented a new and Improved Sewing-Machine Attachment; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1, Plate 1, is a perspective view of my improved tucking attachment and pricking-marker. Figs. 2 and 3, Plate 1, are perspective views of two attachments, both showing hemming, tucking, and pricking markers. Fig. 4, Plate 1, is a perspective view of a spring pressure-plate, guide, and hemming device, such as is represented in Figs. 2 and 3. Fig. 5, Plate 2, is a top view of Fig. 1. Fig. 6, Plate 2, is a front view of Fig. 1. Fig. 7, Plate 2, is a top view of Fig. 2. Fig. 8, Plate 2, is a front view of Fig. 3.

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

This invention relates, first, to a device which is adapted for being fastened either directly to the cloth-plate of a sewing-machine or to the pressure-bar of such a machine, and which is intended for guiding the cloth and definitely marking off the widths of tucks during the operation of tucking or plaiting, so that tucks or plaits may be conveniently made at regular distances apart, of uniform widths, and parallel to one another; and it relates also to a combination of a hemming device with a part of the device which is used in tucking, whereby the advantages of a tucking, hemming, and pricking marker are combined in one instrument.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings, Figs. 1, 5, and 6, A represents the main plate or frame of the device, which is constructed with oblong parallel slots *b b* through it; also, with a transversely-curved portion, *a*, beneath which the cloth passes to and from the needle; also, with a needle-hole, *f*, through it, and also with an elevated socket, J, which latter is adapted to receive the lower end of the pressure-bar of a sewing-machine, when it is desired to fasten the device to such bar instead of to the cloth-plate of such machine.

Transversely across the bottom of the slotted plate A extends a cloth-guide, B, which is secured in place by a thumb-nut, *c*, the stem of which passes from below upward through one of the slots *b*. The ends of the guide B are turned up to prevent it from being turned obliquely.

In front of the slotted plate A, and lying parallel thereto and beneath the upturned lip *a*, is a thin strip, D, which is secured by means of a set-screw, *d*, and a transverse extension, *d'*, to the slotted plate A farthest from the vertical needle-hole *f*. The free end of the strip D is turned over at *g*, and the upper portion thereof is perforated at *f'* for receiving through it a pointed marker, *i*, hereinafter explained. The lower portion of plate D, just beneath the perforation *f'*, being some distance below the upper portion, *g*, there will be a space between it and said portion, and therefore the pointed piercing-marker, although adjusted to penetrate through the cloth, will not come in contact with the lower portion of strip D nor strike the bed-plate of the machine during the operation of tucking and marking the cloth. This strip or spring D is of great importance in hemming, and serves to keep the cloth up to the turner, and does not allow it to slip out of the turner. A thin strip, E, of spring metal is secured to that end of the strip D in front of the set-screw *d*, and lies in front of slotted plate A and over the said strip D. There is a space between the strips D and E, and also a space between the strip E and plate A, as shown in the drawings.

The pricking-marker *i* is confined by a set-screw, *j*, to the free end of a spring overhanging arm G, which is permanently secured to the cross-piece *d'* in front of the thumb-nut *d*. This arm G may be slotted, as shown in Figs. 1, 2, 5, and 7, so that the needle on the needle-bar of the sewing-machine can play freely through it; or the arm may be made narrow, as in Figs. 3 and 9, and the sewing-needle play on one side of it.

During the operation of tucking or plaiting with the device above described the cloth, properly folded, is fed beneath the spring smoothing-strip E, over the strip D, and beneath the slotted plate A. The folded edge of the cloth is guided straight by the transverse strip B, which can be adjusted toward

or from the needle-hole *f*, according to the width of tuck required. At each descent of the needle-bar of the sewing-machine this bar strikes and depresses the arm G and causes its point *i* to penetrate the cloth, and thus make a positive mark. The pricking-arm and the strips D E are adjustable in order to adapt the instrument to tucks of different widths.

The instrument above described is not designed for hemming, but may be modified as follows, so as to both tuck and hem: Take away the strip E and substitute the combined tucking and hemming strip N *n o*, and attach the same to the bar or shouldered guide portion B, as represented in Figs. 2, 3, 7, 8, and 9. Next apply a turner, *t*, that corresponds with the turner described in my Letters Patent No. 96,180. This turner may be permanently secured to the front edge of the plate A, as shown in Figs. 2, 7, and 8, with its turning-hook *s* in close relation to the turned-up portion *a*, or this turner may be made adjustable, as shown in Figs. 3 and 9.

The combined tucking and hemming strip N *n o* occupies the same place and serves the same office as the strip E in the operation of tucking, and it also serves as an auxiliary to the turner *t* in the operation of hemming. This device consists of a thin strip of metal bent, as shown in the drawings, so as to form a bottom piece, *n*, from which rises a number of lapping lips, *o*, and a top piece, N, lying directly over these lips and serving to keep the cloth down in place while hemming. The lapping lips *o* are curved in a direction opposite to the hook *s* of the turner *t*, and any one of the lips, when properly adjusted with respect to the hook *s*, will operate precisely as described for the lapping lip in my Letters Patent No. 96,180. The tongue or strip *n*, from which the lapping lips rise, serves the same purpose as described for the smoothing-strip E during the operation of the tucking when the work is fed up to the needle beneath said tongue. It will be observed that the lapping lips *o o* are turned up from a horizontal strip which has previously been slitted or notched on its inner edge, and that their upper broad bearing-surfaces are in a plane parallel with the bearing-surface of the tongue *n*. It will also be observed that the tongue *n* extends nearly to the guide bar or shoulder B, and that the entrance for the material under the plate N of the strip is between said bar and the end of the tongue. This combined tucking and hemming device N *n* may be secured to an adjustable guide, B, as shown, Figs. 2, 4, 7, and 8, and adjusted by loosening the thumb-nut *c;* or said device may be formed on an adjustable slide that is held beneath lips *l l*, together with the plate on which the turner *t* is formed, as shown in Figs. 3 and 9.

The instrument represented by Fig. 9 is adapted for being secured upon the cloth-plate of a sewing-machine, and for this purpose the hole *v* and oblong slot *e* are made to receive through them the confining-screw. The arm G in Fig. 7 is removable, and is held fast when in place by a thumb-nut, *m*. The follower *g'* in Fig. 9 corresponds to the follower described in my Letters Patent above referred to, with this exception, that a part, g^2, of this follower *g'* is turned up and slotted to serve as a guide for the arm G.

It will be seen from the above description that during the operation of tucking or plaiting the work is marked off for each succeeding tuck while stitching the tucks, and that the marks are produced by a pointed instrument which penetrates the work at each descent of the sewing-needle. The marks or lines thus made are better defined than a mere crease, and will not be obliterated by handling the work.

It will also be seen that by employing a removable pricking-arm and an adjustable device, N *n*, in combination with a turning device, I have a combined tucker and hemmer.

The advantage attending the attachment of the instrument to the pressure-bar of a sewing-machine is that when the lower thread runs out or breaks, so that it is necessary to take out the shuttle, this can be done without removing the instrument. In this way the difficulty and loss of time of readjusting are avoided.

The strip D, above described, over which the cloth passes on its way to the needle, serves as a support for the cloth and keeps it up in position while feeding.

Having described my invention, what I claim is—

1. The spring-arm G, furnished with the piercing-marker *t*, and constructed, as described, so as to be operated by the descending motion of a sewing-machine needle, in combination with the adjustable guide B, cloth supporting and adjusting spring strip or plate D, smoothing-strip E, (or its equivalent N *n o*,) and plate A *a*, substantially in the manner and for the purpose described.

2. The tuck-marker consisting of the strip D, bent at *g* and perforated at *f'*, and the pricking-marker *i* on the arm G, all connected together and forming an attachment, substantially as described.

3. The strip N, formed with turned-up lapping lips *o o*, and extended from the guide-bar, or from an adjustable guide-shoulder, B, a suitable distance, and carried back to within a short distance of said shoulder, so as to form a tongue, all substantially in the manner and for the purpose described.

4. The combination of the hemming and tucking devices in one implement, substantially in the manner described.

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