L. CLARK.

HEM FOLDER.

No. 25,807. Patented Oct. 18, 1859.

Fig: 6.

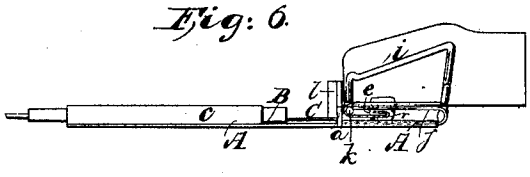


Fig: 5.

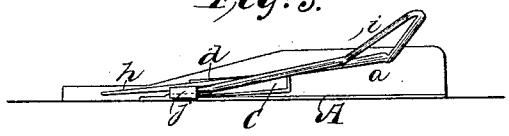


Fig: 1.

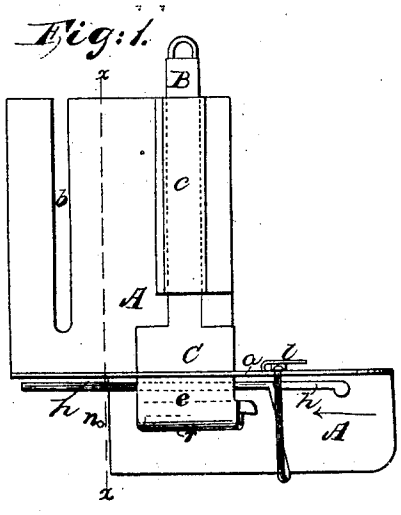


Fig: 2.

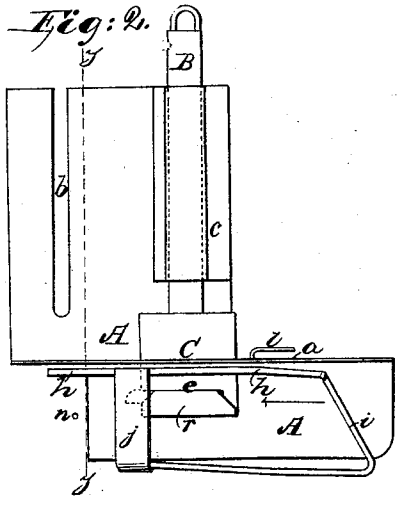


Fig: 3.

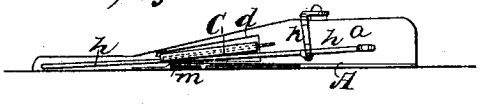
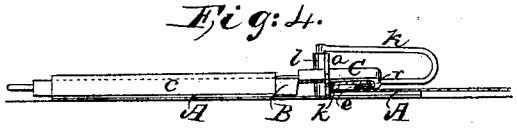


Fig: 4.



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UNITED STATES PATENT OFFICE.

LEVERETT CLARK, OF MONTICELLO, NEW YORK.

IMPROVEMENT IN HEM-FOLDERS.

Specification forming part of Letters Patent No. **25,807**, dated October 18, 1859.

To all whom it may concern:

Be it known that I, LEVERETT CLARK, of Monticello, in the county of Sullivan and State of New York, have invented a new and Improved Hem-Folder for Sewing; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figures 1 and 2 are plan or top views of my folder as adapted for a sewing-machine, exhibiting its adjustments for turning the folds opposite ways. Fig. 3 is a front view corresponding with Fig. 1. Fig. 4 exhibits a section corresponding with Figs. 1 and 3, taken in the plane indicated by the line *x x* of Fig. 1. Fig. 5 is a front view corresponding with Fig. 2. Fig. 6 exhibits a section corresponding with Figs. 2 and 5, taken in the plane indicated by the line *y y* of Fig. 2.

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

My invention consists of a folder of a novel character for the purpose of folding cloth or other material preparatory to hemming, which provides for folding hems of different widths and for turning the hem either over or under the main portion of the material, as may be desired, said guide being suitable for use in a sewing-machine or for turning a hem for sewing by hand.

To enable others to make and use my invention, I will proceed to describe its construction and operation.

A is a flat plate, having a straight projection, *a*, standing up at right angles to its surface, and containing a straight slot, *b*, arranged at a right angle to the said projection *a*. This plate is intended to be bolted to the bed-plate of a sewing-machine by one or more screw-bolts passing through the slot *b*, and to be arranged with the projection *a* parallel with the direction of the feed movement, the slot *b* permitting the adjustment of the plate to bring the projection *a* nearer to the needle, while the said projection continues parallel with the direction of the feed movement. The projection *a* serves as the gage for the fold of the outer margin of the hem, and the adjustment above described is for the purpose of providing for folding hems of different widths.

B is a straight bar fitted to slide parallel with the slot *b*, and consequently at right angles to the gage *a*, in a guide-box, *c*, which is secured on the top of the plate A. To this sliding bar B is attached a plate, C, which has its front marginal portion twice bent at one hundred and eighty degrees, as shown at *e* and *r* in Figs. 4 and 6, to form a double parallel groove between the bends wide enough to admit the thickness of the material to be folded, said grooves being parallel with the gage *a*. This plate C passes through a slot, *d*, (see Figs. 3 and 5,) provided for it in the gage *a*. The bar B may be so arranged in the guide-box *c* as to present the plate C with its bent marginal portion upward, as shown in Figs. 2, 5, and 6, or downward, as shown in Figs. 1, 3, and 4, the body of the said plate C in the former arrangement fitting nearly close to the plate A, only being slightly inclined thereto, as shown in Figs. 5 and 6, but in the latter arrangement standing some distance above the said plate C, as shown in Figs. 3 and 4.

h is a bar, made of flattened wire or other light metal, arranged parallel with and nearly close to the face of the gage *a*, as shown in Figs. 1 and 2, but inclined to the surface of the plate A, as shown in Figs. 3 and 5, and nearly touching the said plate at its extremity. This bar requires two modes of attachment to suit the two arrangements of the bar B and plate C. For the arrangement shown in Figs. 2, 5, and 6 the said bar *h* is attached by a long curved arm, *i*, to a slide, *j*, which slides into a horizontal mortise, *m*, in the front of the plate A; but for the other arrangement the said bar *h* is attached to a curved arm, *k*, of different form, the extremity of which slides in a vertical mortise, *l*, in the back of the gage *a*. To permit the use of the same folder to turn the fold either below or above the body of the material, two of these bars *h* must be provided—viz., one for each mode of operation.

The most advantageous arrangement of the parts of the folder is that shown in Figs. 2, 5, and 6, as that turns the hem below the main body of the cloth or other material, instead of above, as is the case with all the hem-folders, or, as they are sometimes termed, "hemmers," of which I have any knowledge. The turning of the fold above when the apparatus is applied to many kinds of sewing-machines whose stitch only presents a fair appearance on the

upper side brings the fair side of the stitch on the back or wrong side of the material; but when turned the reverse way the fair side of the stitch is brought on the right side of the material. The operation of the folder in this arrangement of its parts is as follows: The bar B and plate C are adjusted to bring the inside of the bend *r* at a distance from the face of the gage equal to the desired width of hem, and the plate A is so adjusted as to bring the face of the gage *a* at the distance from the line of motion of the center of the needle equal to the desired distance of the stitching from the outer margin of the hem. The position of the needle relatively to the parts of the folder is represented in Figs. 1 and 2, where the needle *n* is represented in section. The parts being adjusted as above specified, the marginal portion of the cloth or material to be hemmed is introduced at the end of the gage *a* represented at the right hand of Fig. 2, between the bar *h* and the gage, and passed over the top of the plate C, and the edge of the material is turned down with the finger to enter the double groove formed between the bends *e r*, as shown in Fig. 6, where the material is represented in red color. The material is then moved along with the fingers in the direction of the arrow shown in Fig. 1 till its end passes the plate C far enough to be taken hold of by the feeding apparatus, which occupies the usual position relatively to the needle *n*. The main portion of the cloth is then brought forward over the top of the bar *h* and its attaching-arm *i*, the latter of which supports it and keeps it clear of the hem, and on the machine being set in operation the material moves in the direction of the arrow shown in Fig. 2, and as its marginal portion is drawn through the folder it is folded all the way along the bend *r* of the plate C and between the bar *h* and the gage *a*, as shown in Fig. 6, and as it passes along to the needle the folds are pressed flat by the feeding apparatus of the sewing-machine.

The operation of the folder for turning a hem above the main portion or body of the cloth, as illustrated in Fig. 4, differs very little from what is above described, the only difference being that as the body of the cloth rests upon the plate A, the folds are produced in the same manner by the bend *r* of the plate C, and by the combined action of the bar *k* and the gage *a* as the material is drawn through the folder in the same direction as before specified.

The folder requires no alteration for adapting it to folding a hem for sewing by hand. The plate A merely requires to be attached to a table.

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

The hem-folder composed of a straight gage, *a*, an adjustable plate, C, constructed as described, and a bar, *h*, the whole combined as described, either arranged as shown in Figs. 1, 3, and 4 or as in Figs. 2, 5, and 6, and operating substantially as herein described.

LEVERETT CLARK.

Witnesses:
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