

J. F. JOHNSON.
Hemmers for Sewing-Machines.

No. 146,684.

Patented Jan. 20, 1874.

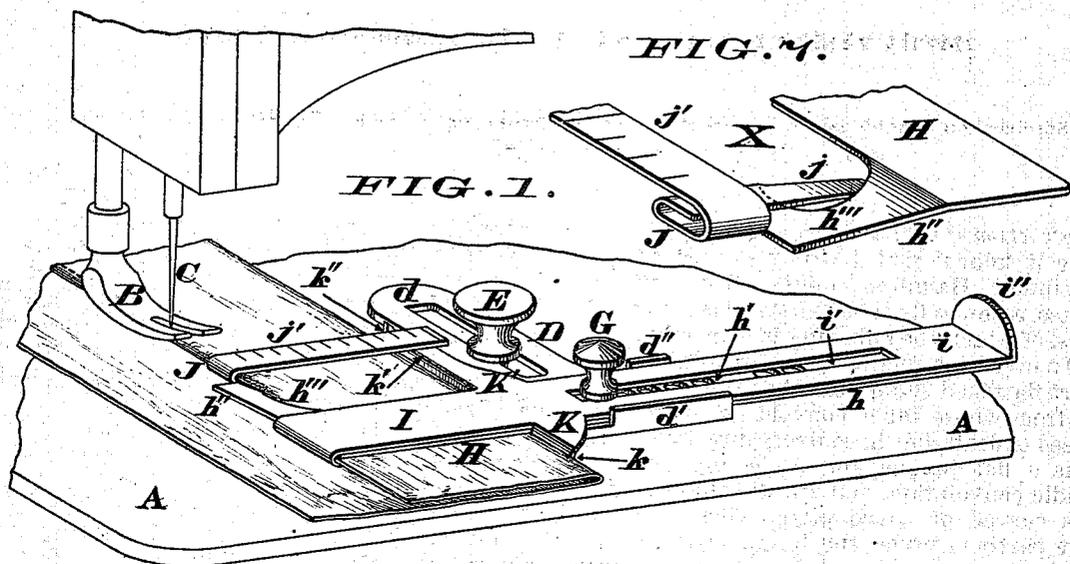


FIG. 4.

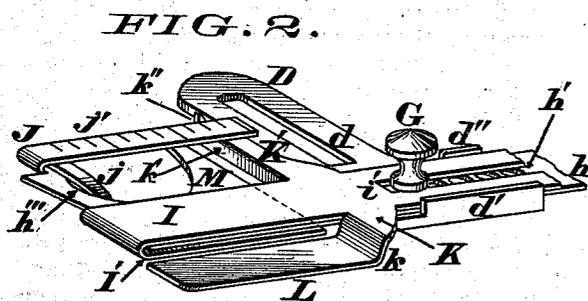


FIG. 2.

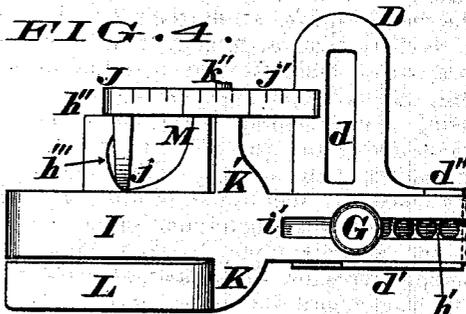


FIG. 4.

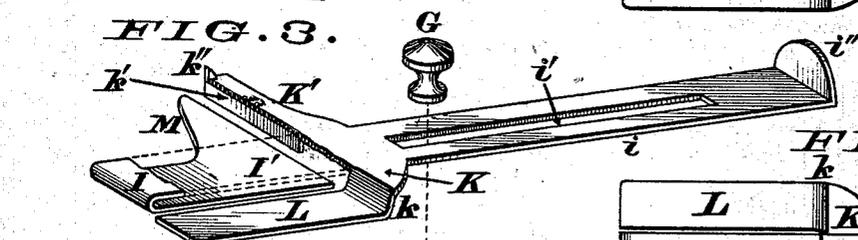


FIG. 3.

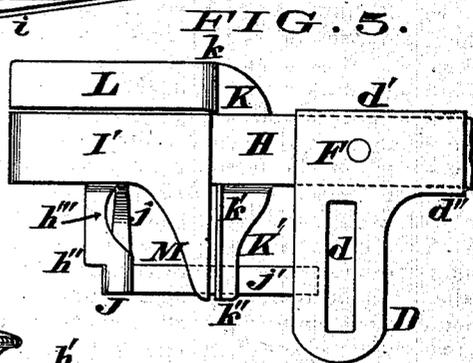


FIG. 5.

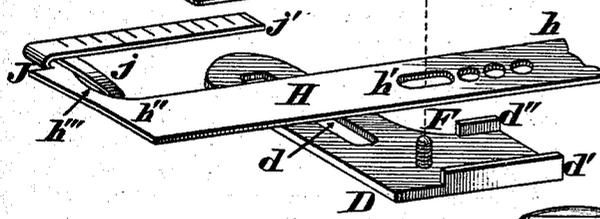
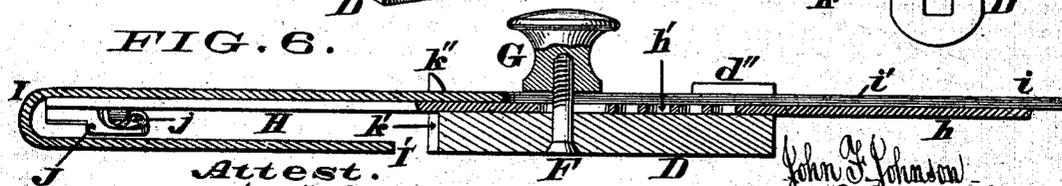


FIG. 6.



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UNITED STATES PATENT OFFICE.

JOHN F. JOHNSON, OF CINCINNATI, OHIO.

IMPROVEMENT IN HEMMERS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 146,684, dated January 20, 1874; application filed December 17, 1873.

To all whom it may concern:

Be it known that I, JOHN F. JOHNSON, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Improvement in Hemmers, of which the following is a specification:

My invention relates to an arrangement of short flattened scroll near the needle, projecting from whose inner convolution in the line of feed or draft, but in contrary direction thereto, is a flat tongue, and projecting from its middle convolution, and toward the operator, is a curved or coved plate, whose concave edge partly encircles the tongue, and projecting from its outer convolution, at right angles to the feed or draft, is a flattening-blade. The said devices thus arranged, in combination with a bar to facilitate the introduction and feeding of the goods, and provisions for increasing or diminishing the width of the hem without disturbing the relation of the scroll with respect to the needle, enable a comparatively unskilled operator to produce a perfect hem with very little manipulation or care.

In the accompanying drawing, Figure 1 is a perspective view of a hemmer embodying my improvements, the same being in position on the cloth-plate of a sewing-machine and in the act of hemming. Fig. 2 shows the same detached, and without the cloth, portions of the gage-plate and scroll-plate being broken off. Fig. 3 shows the parts of my hemmer detached, a portion of its U-shaped blade being broken off. Figs. 4 and 5 are respectively top and bottom views of my hemmer, set for a narrower hem, portions of the gage and scroll plates being broken away. Fig. 6 is an enlarged transverse section of the hemmer, at right angles to the feed. Fig. 7 is an enlarged representation of the scroll and its accessories.

A, B, and C may represent, respectively, portions of the cloth-plate, the presser-foot, and the needle of an ordinary sewing-machine. D is a hemmer foot-plate, whose slot *d* receives customary thumb-screw E, which attaches it to the cloth-plate. Flanges *d'* *d''*, on said foot-plate, serve, in conjunction with screw-stud F, having nut G, to guide and hold the scroll-plate H and the gage-plate I. Of these plates, the scroll-plate consists of a long flat shank, *h*, having several holes, *h'*, one or other of which, in using, is occupied by the screw-stud F. The

necessity of several holes arises from the diverse positions, with respect to the needle, of the attachment-hole in the cloth-plate of different leading sewing-machines for which this hemmer is designed to be applicable, without change, other than the first adjustment, which the slot *a* and the holes *h'* enable to be made once for all. It will thus appear that the same screw-stud F and clamp-nut G, by which the gage-plate is adjusted to different widths of hem, are employed to permanently attach the scroll-plate in the required position to suit any sewing-machine, and by employing a series of holes for the adjustment of the scroll-plate I avoid disturbing the position of the scroll relatively to the needle in adjusting the gage-plate. From the left end of the blade *h* projects, parallel to and in the direction of the feed, and slightly drooping toward the cloth-plate, an arm or bar or blade, *h''*, having a concave curve or cove, *h'''*, on its right edge. The extremity of the arm *h''* takes the form of a short flattened scroll, J, from whose inner portion, a little to the right of the bar *h''*, there projects a tongue, *j*, parallel, but in a contrary direction, to the feed, the end of said tongue being rounded and slightly declining toward the cloth-plate, while the outermost portion of the scroll takes the form of a blade, *j'*, which extends transversely over, so as to touch the flattened upper surface of the hem in close vicinity to the needle, and acts as a cloth-presser blade. The blade *j'* may be marked with a scale, as shown, so as, in conjunction with an upturned spur, *k''*, from the gage-plate, to enable the operator to readily set the apparatus to any desired width of hem. The shank *i* of the gage-plate is slotted at *i'*, and terminates in a lip, *i''*, to enable its adjustment to right or left, for the desired hem, said plate having front and rear projections K K', whose downturned edges *k* *k'* serve as guides or gages for the shoulder of the hem, and whose portion *k* is prolonged horizontally, to form a bar, L, to facilitate the insertion of the goods, and to constantly support the goods in feeding into the hemmer in machines in which the bed-plate is not extended sufficiently for this purpose. The said bar is also useful in smoothing out wrinkles in the entering goods, and serves as a guide for the first introduction of the goods. Be-

tween the portions K and K' the blade I is prolonged, and bent downward and rightward, as shown, so as to form a U-shaped passage, I', for the folded goods on their way to the scroll. The lower member of I is flared at M, at its right extremity, as shown.

The operation of my hemmer is as follows: The parts being adjusted and set to their proper relative positions for the desired width of hem, as already explained, the goods are drawn into the scroll, and, the machine being set in motion, the hemming proceeds with very little requirement of manipulation. The tongue, projecting toward the operator, allows the folded cloth to be drawn completely back, so as to begin the hemming at the extreme advance end, and so acts in conjunction with the curved or coved plate and other parts, above described, as to draw and curl the edge of the goods, without liability to run out or stretch unequally either the upper or the lower folds, so as to produce kinks or puckers in the cloth; nor is it necessary to hold the edge of the goods up so as to initiate the desired rolling action, as is commonly the case, but, on the contrary, the goods are introduced at once in the simple flattened folded condition.

The open space X enables the operator to watch the goods in the very act of rolling, to form the under tuck of the hem, and permits a second manipulation of the goods just before entering the scroll proper, if desired. This is

quite useful, occasionally, in securing the proper hem at the concluding end.

I have selected to illustrate my invention the form which actual test has proved effectual, but may vary or omit some of the features—for example, the cloth-presser blade *j'* may be omitted for the narrowest hems, and the coved bar *h'''* may be replaced by a curved plate which can be detached from the scroll.

I claim as new and of my invention—

1. The elastic tongue *j*, constituting the inner convolution of the scroll, projecting in line of and in opposite direction to the feed, in combination with the curved blade *h''* and the flattened scroll *J*.

2. The scroll-plate *H*, having the series of holes *h'*, for the permanent adjustment of the scroll relatively to the needle, in combination with the slotted gage-plate *I*, adjustable on the same screw *F*, as set forth.

3. The gage-plate *I*, having rest-bar *L*, and shoulders *KK'*, in combination with the spreader *I'*, and the elastic tongue *j*, and curved blade *h''*, all arranged as described, to facilitate the introduction and feeding of the cloth, as explained.

In testimony of which invention I hereunto set my hand.

JOHN F. JOHNSON.

Attest:

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