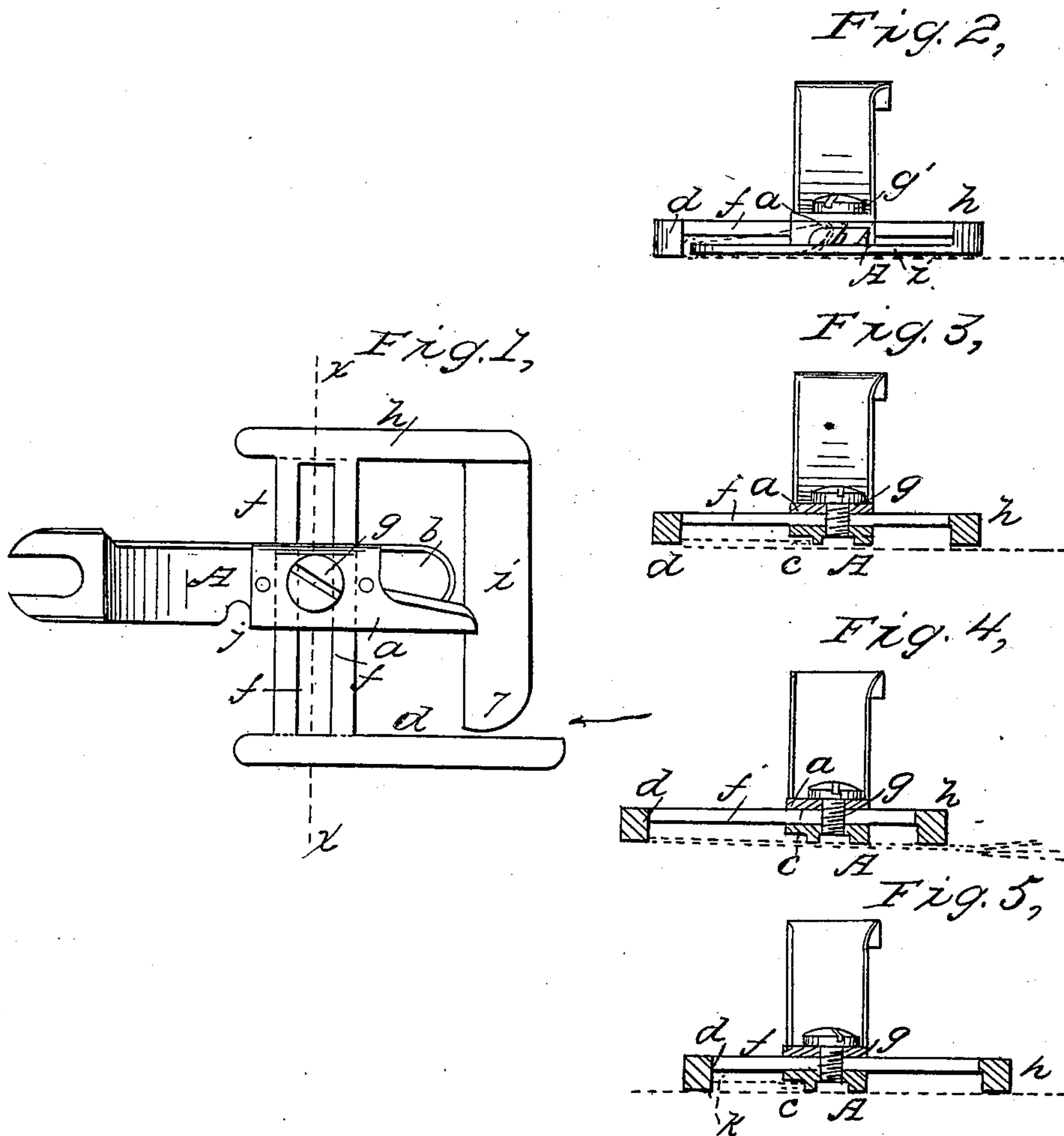


F. HENRY.
Guide and Hemmer.

No. 37,505.

Patented Jan. 27, 1863.



Witnesses:
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UNITED STATES PATENT OFFICE.

FRANK HENRY, OF BRIDGEPORT, CONNECTICUT.

IMPROVEMENT IN HEMMING, TUCKING, AND FOLDING GUIDES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 37,505, dated January 27, 1863.

To all whom it may concern:

Be it known that I, FRANK HENRY, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new and Improved Folder for Hemming, Tucking, and Felling in the Sewing-Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top view of the folder. Fig. 2 is a view of the same, taken on that side at which the cloth to be folded enters. Figs. 3, 4, and 5 are vertical sections of the same, parallel with Fig. 2, in the plane indicated by the line *xx* in Fig. 1, illustrating respectively the operations of hemming, tucking, and felling.

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

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

a b c is the device for turning the edge of a hem, constructed and combined with the presser-foot piece A, substantially like what is commonly used in what is known as the "Wheeler & Wilson sewing-machine," except that I have substituted for the fixed guide commonly provided on the foot-piece for the outer fold of the hem an adjustable guide, *d*, consisting of a straight bar, which is kept parallel with the fixed guide *c*, Fig. 3, commonly provided for the inner fold, and with the direction of the feed movement, by means of a flat slotted shank, *f*. The said shank is rigidly attached to one end of the said bar at right angles to it, and is fitted to slide in a groove provided across the foot-piece A for its reception, and can be secured with the guide *d* at a distance from *c* equal to the desired width of the hem by means of a set-screw, *g*, which passes through the upper plate, *a*, and through the slot *f* of the shank, and screws into a tapped hole in the foot-piece A, the head of the said set-screw pressing upon the said plate and causing it to clamp the shank *f*. To the other end of the shank *f* there is rigidly secured a bar, *h*, to which is rigidly secured the blunt-edged knife or knife-like plate *i*, which occupies a position at right angles to the guide-bar *d*, with its extremity only so far from the said bar as to permit the thickness of a piece of cloth to pass between them. The outer fold of the hem,

fell, or tuck is turned over the end of this plate, which is rounded off on its outer or front side, as shown at 7 in Fig. 1, to prevent it from catching in the cloth.

To use the folders the guide-bar *d* and plate *i* are first adjusted with the inner edge of the guide-bar *d* at a distance from the edge of the fixed guide *c* equal to the desired width or depth of the hem, tuck, or fell. To turn a hem the cloth is inserted in the direction of the arrow shown in Fig. 1, between the guide *d* and the end of the plate *i*, and folded over the plate *i*, and its edge introduced between the parts *a* and *b*, by which the inner fold of the hem is turned, and when the feed-motion is set in operation the cloth is drawn along, and while its edge is turned under by the parts *a* and *b* to make the inner fold the outer fold is formed at a regular distance from the inner one by the combined action of the guide-bar *d* and the end of the plate *f* in the manner illustrated in Fig. 2, in which the transverse section of a hem in course of formation is shown in red color. In this operation the lower or principal portion of the hem is kept smooth by the plate *i*, which also keeps the outer fold close up to the guide *d*, and at a uniform distance from the inner fold, thus making the hem of uniform width. The needle operates through the hole or notch *j* in the foot-piece A, which, occupying a fixed position relatively to the guide *c*, which guides the inner fold of the hem, causes the stitching to be produced at such distance from or as close to the inner fold of the hem as may be desired.

In tucking the cloth is folded in the line which is to form the outer edge of the tuck, and placed under the bar *h*, plate *i*, and foot-piece A, with the edge of the fold against the bar *d*, which in that operation operates as a guide to keep the said edge at a distance from the line of motion of the needle equal to the desired width of the tuck.

In felling the seam is first made with a wider margin on one side than on the other, and the two pieces of the cloth are laid out flat under the plate *i* and bars *d h*, with the wider margin upward and over the plate *i*, and with the ridge *k* formed by the seam against the inner edge of the bar *d*, and the edge of the wider margin is introduced between the portions *a b* of the folder, and when the feed-motion is set in operation the cloth, being drawn along with the

ridge of the seam in contact with the edge *d*, has the edge of the wider margin folded by the portions *a* and *b* of the folder at a uniform distance from the seam, and the latter fold is presented as close to the needle as is desired, making the fell of uniform width and the stitching of the fell at a uniform distance from the seam. In this operation the plate *i* works inside of the fell and holds the ridge of the seam against the guide-bar *d*.

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

The combination, with the hem turner *a b c* and foot-piece A, of the adjustable guide *d*, constructed with shank *f*, bar *h*, and plate *i*, all substantially in the manner herein shown and described.

FRANK HENRY.

Witnesses:

JOSIAH HUBBELI,
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