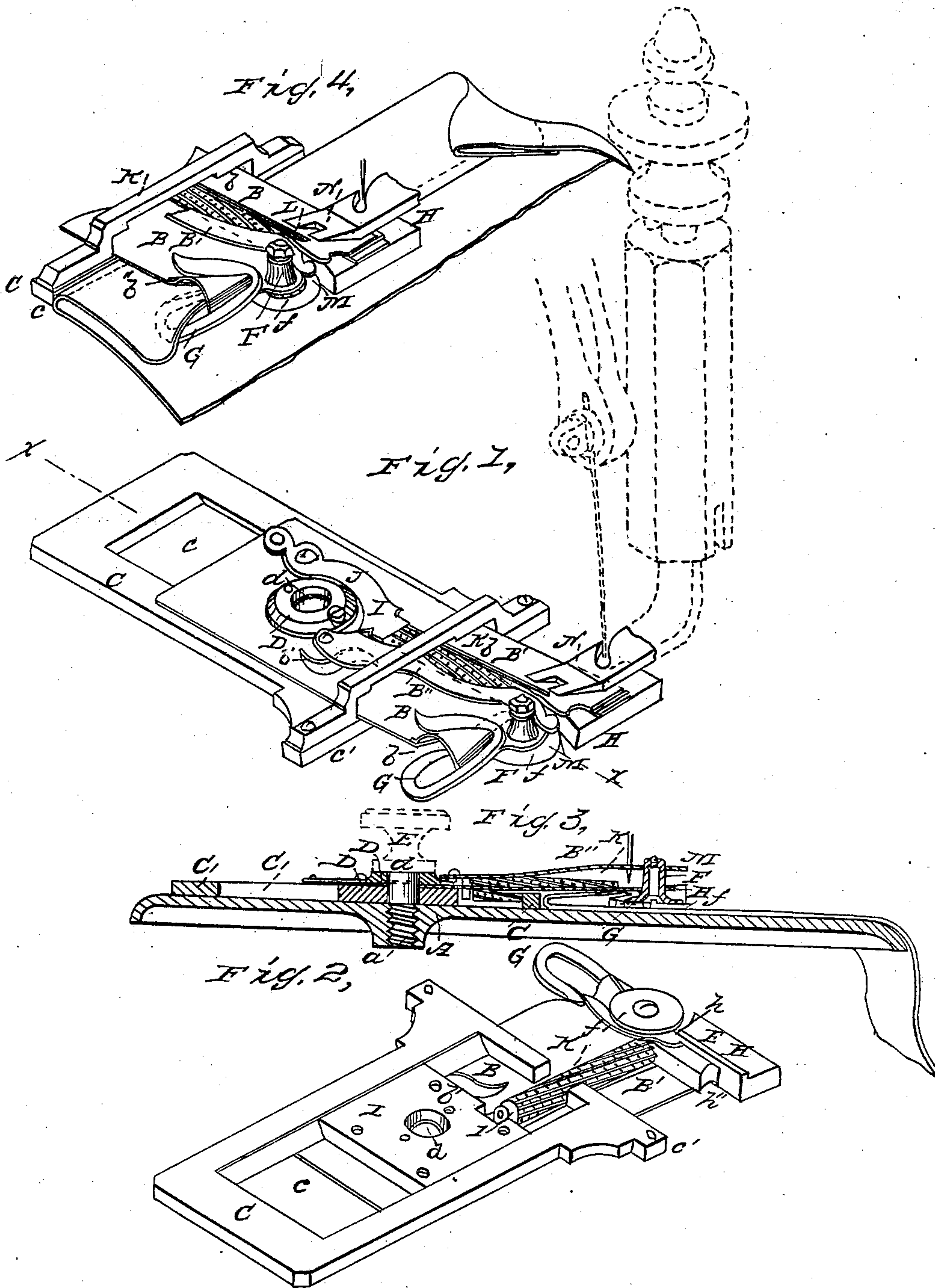


BLAKE & JOHNSTON.  
Sewing Machine Hemming Guide.

No. 25,715.

Patented Oct. 11, 1859.



Witnesses:  
Geo E Hardy  
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# UNITED STATES PATENT OFFICE.

S. E. BLAKE AND T. JOHNSTON, OF LOUISVILLE, KENTUCKY.

## IMPROVEMENT IN HEMMING-GUIDES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 25,715, dated October 11, 1859.

*To all whom it may concern:*

Be it known that we, SOLOMON E. BLAKE and THOMAS JOHNSTON, both of Louisville, Jefferson county, Kentucky, have invented a new and useful Hemming and Tucking Guide for Sewing-Machines; and we hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification.

The said invention relates to provisions for turning and folding hems and tucks, and for holding them flat and to any uniform width.

In the accompanying drawings, Figure 1 is a double-size perspective view of an attachment embodying our improvements. Fig. 2 is a similar view of it inverted. Fig. 3 is a vertical section at *x x*, Fig. 1. Fig. 4 is a diagram illustrating the operation.

A represents the plate of a sewing-machine.

BB' is the guide-frame, consisting chiefly of a thin plate of spring-steel partially divided by a longitudinal gap or interval, *b*.

C is a stiff metallic plate of U form, called the "gage," and provided with a square flange or shoulder, *c'*. The gage C is restricted to rectilinear adjustment beneath the frame BB' by a boss, D, on the bottom of the frame, occupying a dovetailed longitudinal slot, *c*, in the gage. A central aperture, *d*, in the boss D permits the insertion of a clamping-screw, E, which, fitting a screw-hole, *a*, in the plate A, serves the twofold purpose of holding the guide to the plate and of clamping or fixing the gage to its point of adjustment. Each of the limbs B and B' constitutes a spring adapted to yield upward at its free end. An oblique end, *b'*, in the limb B causes its flexibility to be chiefly in an oblique direction from the corner *b''* outward and forward with respect to the hem, so as to facilitate the insertion of the stuff and the passage of cross-seams and other irregularities. The flexibility of the limb B' is transverse to the hem. The free end of the limb B is surmounted by a supplementary spring, B'', from which depends vertically a stud-shaft, *f'*, forming the axis of a conical roller, F, fluted longitudinally and terminating below in a flange, *f*.

From the top of the limb B projects also a tongue, G, of spring-steel, having its free extremity flattened and twisted in a right-hand spiral form. This tongue is for the first half of its length directed backward, and is thence

reflexed, so that its extreme tip enters the space between the flange *f* of the roller F and the under side of the limb B, against which latter it slightly presses.

The forms and relative adaptations of the yielding plate B, the spiral tongue G, and the flanged roller F facilitate the turning and folding of hems containing cross-seams and materials of various thicknesses. The limb B' has beneath its free end a boss or "pad," H, having a chamfer, *h*, to facilitate the entrance of the folded hem, a bounding-shoulder, *h'*, for the inner edge of said hem, and a notch, *h''*, for the passage of the needle.

K is a roller occupying the central intervals, *b* and *c*, of the frame and of the gage, and journaled at its respective ends in the pad H, and in a yielding block, I, united by a spring, J, to the frame BB'. The limb B' is more rigid than the spring J, so as to enable the pad H to tightly press the inner edge of the beam when the feed is applied, and so as for the roller K to derive its rotation chiefly from the advance of the inner edge of the hem, the outer end of the roller reacting upon the hem toward and at its outer edge, so as to keep it flat and to its full width. The roller K, by its capacity for yielding bodily upward, or at either end, permits the easy and equal passage of the hem, notwithstanding any inequality of thickness or texture or irregularity of draft. To insure the efficiency of the roller K in preserving a flat hem or tuck of uniform breadth, we form on its surface a series of right-hand spiral ribs indented with transverse nicks or grooves, substantially as represented.

L M are handles, by means of which the pad H and the rollers F and K may be temporarily retracted for the purpose of inserting or removing the work.

For heavy work a customary pressure-pad, N, may be used to assist the action of the pad H and roller K.

Operation: The guide is placed in position so that the thumb-screw E occupies the screw-hole *a* in the plate A of the sewing-machine, and so that the notch *h''* coincides with the path of the needle. The gage C is then adjusted so as to bring its shoulder *c'* to the required distance from the seam and the whole clamped fast by the screw E. The edge of the cloth is then folded a short distance and drawn into the guide, and the machine being set in mo-



tion a very slight attention of the operator suffices to continue the fold. A guide thus constructed acts to hold the fold flat and to cause it to advance uniformly and equally without crimping or narrowing the hem, the yielding and spirally-fluted roller K acting to press the folded or outer edge of the hem forward and against the shoulder of the gage, and the yielding conical roller F easing the inner edge of the fold at that part of the scroll where it is subjected to the greatest pressure, and permitting the passage of seams and other irregularities, as before explained. For these reasons the invention is especially applicable to seams of unusual width and of irregular thickness and texture.

The following is what we claim as new and of our invention herein and desire to secure by Letters Patent:

1. The combination and arrangement of the spiral tongue G, flanged roller F, and yielding plate B, for the purpose set forth.

2. The spring-plate B B', constructed, as described, with an oblique slot in the limb B, combined with the adjustable gage C, in the manner and for the purpose set forth.

3. The yielding pressure-roller K, adapted and applied, substantially as set forth, to smooth and flatten the hem previous to stitching.

In testimony of which invention we hereunto set our hands.

S. E. BLAKE.  
T. JOHNSTON.

Witnesses:

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