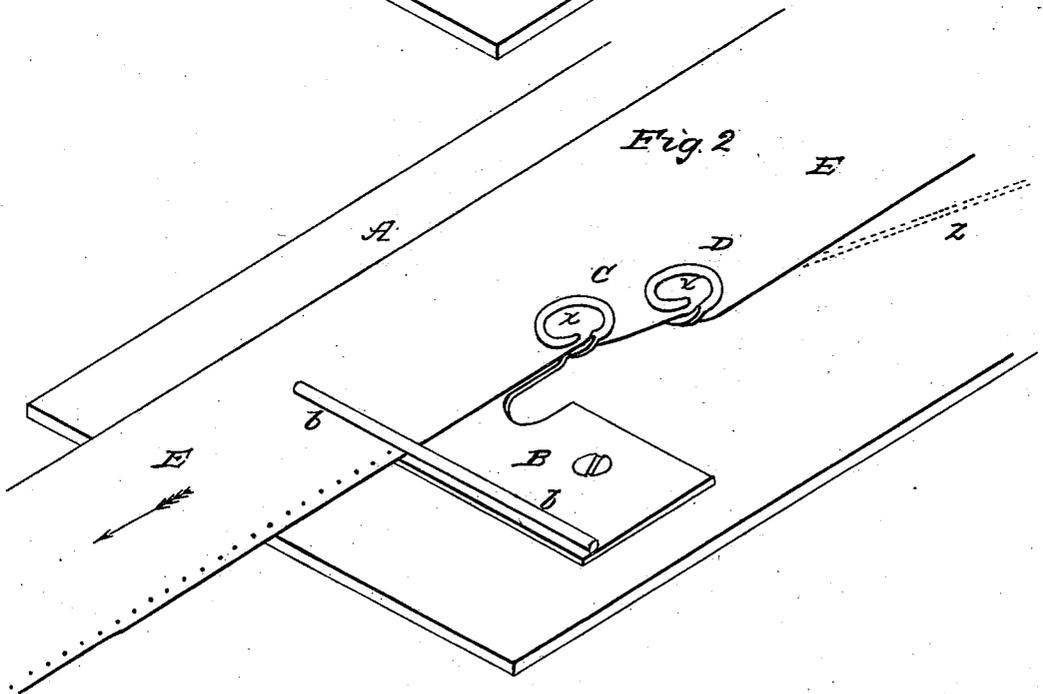
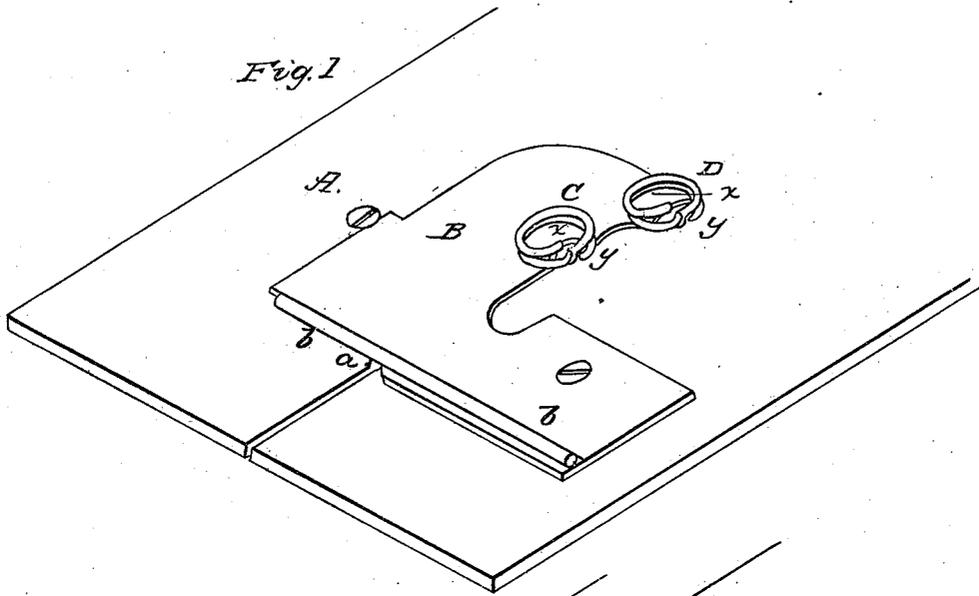


B. C. BOYES.
Sewing Machine Hemmer.

No. 15,402.

Patented July 22, 1856.



Inventor
Burrill C. Boyes.

UNITED STATES PATENT OFFICE.

BURRITT C. BOYES, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO B. C. BOYES AND H. DERCUM, OF SAME PLACE.

IMPROVEMENT IN FOLDING-GUIDES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 15,402, dated July 22, 1856.

To all whom it may concern:

Be it known that I, BURRITT C. BOYES, of the city of Philadelphia, and State of Pennsylvania, have invented a new and Improved Hemming, Folding, and Cording Apparatus to be Attached to Sewing-Machines; 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, and to the letters of reference marked thereon.

My invention consists in applying to sewing-machines, for the purpose of folding a single or double hem on the edge of fabrics, or for the purpose of forming in the middle of fabrics a series of plaits—such as those of shirt-bosoms—one or more helical rings, generally known as “slit rings,” such as are used for watch-chains, key-rings, and other similar purposes.

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

On reference to the drawings which form a part of this specification, Figure 1 is an isometrical perspective view (drawn to a scale of double the real size) of my improved folding, hemming, and cording apparatus; Fig. 2, the same as Fig. 1 with the cloth introduced, in order to show the action of the slit rings on the same.

A is a metal plate such as is generally attached to all sewing-machines for receiving the fabric to be operated upon. *a* is an orifice in the said plate, through which the needle penetrates in the usual manner.

To the plate A, I secure by means of screws or any other convenient attachment another metal plate, B, of the form shown in Fig. 1. To this plate I attach the helical rings C and D, generally termed “slit rings.” Onto the same plate, B, I attach a guard, *b b'*, so arranged that the portion *b'* of the said guard shall be a sufficient distance from the plate A to allow the folded fabric to pass easily, and also a sufficient distance from the orifice *a* for the penetration of the needle, in order to allow the latter to operate freely.

Should it be desirable to turn on the edge of fabrics a single fold or hem, I make use of one ring only, in which case the edge of the

fabric is introduced between the upper and lower wire which forms the ring, and is then drawn in the direction of the arrow, Fig. 2. By this action one end, *y*, of the wire which composes the ring has a tendency to turn over a single fold. The other end, *x*, of the wire guides the said fold, which passes in its further progress under the end *b'* of the guard, so as to be acted upon by the needle and thread of the machine.

Should it be desirable to turn a double hem on the fabric, I make use of two helical rings, as seen in the drawings, one ring being a short distance in advance of the other. The action of these rings and their tendency to turn over a double hem will be readily understood on reference to Fig. 2.

It will be readily perceived that plaits or folds can be formed in the middle as well as on the edge of fabrics by the employment of a similar arrangement of helical or slit rings, the extent of such folds or plaits being determined by the size and arrangement of the rings. By placing a cord, *z*, between the upper and lower wires which form the helical rings previous to the introduction of the edge of the fabric, the said cord will become folded within the hem, as seen in red lines, Fig. 2.

I do not wish to confine myself to the precise shape of the metal plate B, as shown in the drawings, to the precise arrangement of the guard *b b'* in respect to the plate, or to the number of helical or slit rings shown. Nor do I desire to claim a device for which a patent was granted to Seth P. Chapin, and in which hems are formed on the edges of flexible materials by means of folding-guides made to turn the edge one hundred and eighty degrees or more; but

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

The employment of one or more helical or slit rings for the purpose of forming on the edges of fabrics single or double hems, or for forming plaits in the middle of fabrics previous to the said hems or plaits being submitted to the action of the needle and thread of sewing-machines.

BURRITT C. BOYES.

Witnesses:

HENRY HOWSON,
WILLIAM E. WALTON.