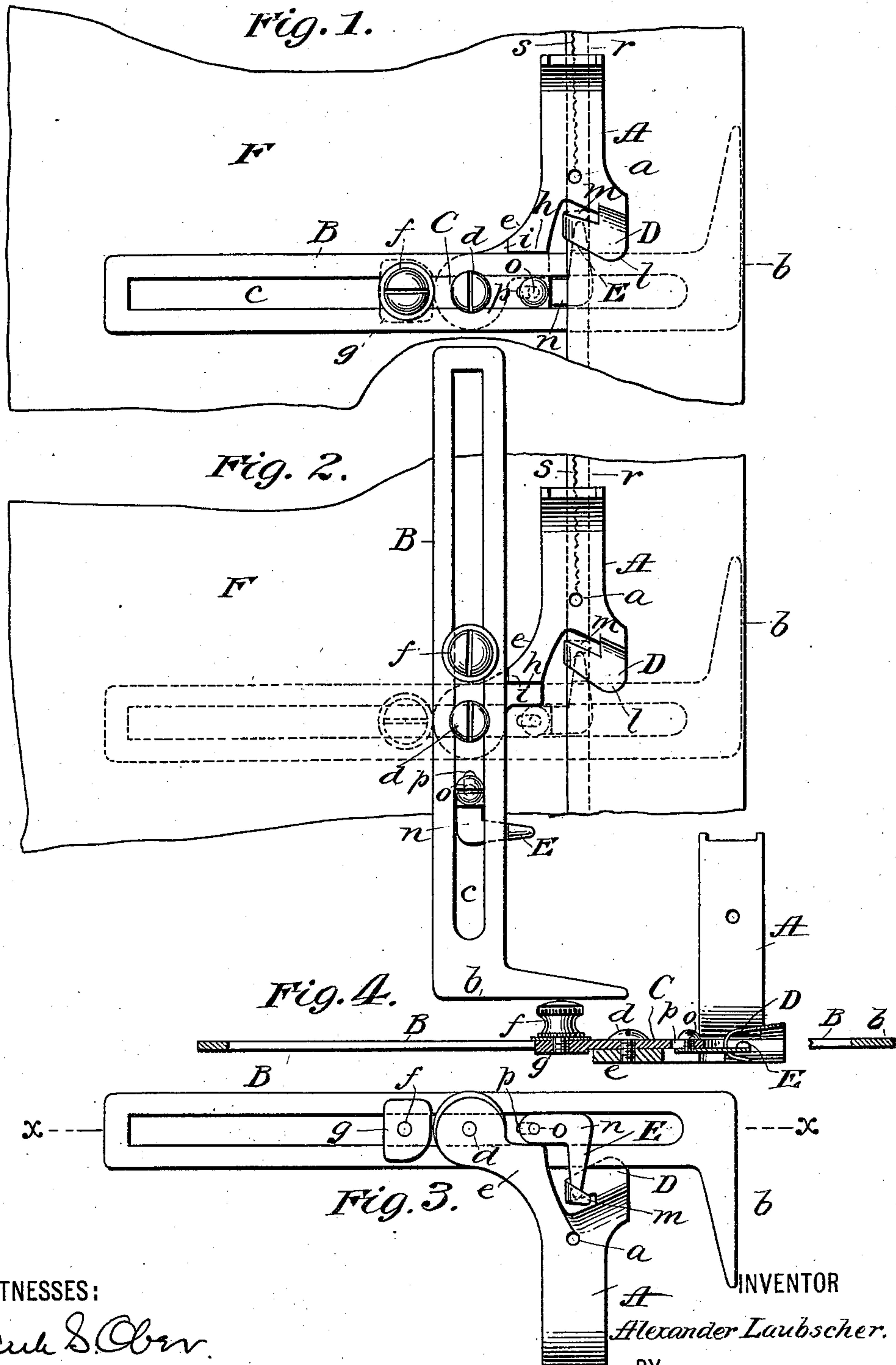


(No Model.)

A. LAUBSCHER.
HEMMER.

No. 560,416.

Patented May 19, 1896.



WITNESSES:

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HEMMER.

SPECIFICATION forming part of Letters Patent No. 560,416, dated May 19, 1896.

Application filed April 13, 1895. Serial No. 545,587. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER LAUBSCHER, a citizen of the United States, and a resident of Bridgeport, county of Fairfield, and State of Connecticut, have invented certain new and useful Improvements in Hemmers, of which the following is a specification.

My invention, while applicable in part to hemmers generally, has reference more particularly to that class of such devices which are made capable of adjustment whereby to adapt them to the formation of hems of different widths, its object being to produce a hemmer of this class which, while capable of making hems of any required widths within reasonable limits and upon materials of different thicknesses, shall at the same time permit of the formation of such hems completely around a tubular article without interfering therewith.

To these ends the invention consists in the combination of an edge-turner arranged upon a support, a gage over which the material is folded to form the hem and capable of being swung back out of operative position when required to permit of the passage of the material through the hemmer without in any way interfering with it during its passage, a tongue for the turner, and means for connecting the gage and tongue to the support whereby to permit of an adjustment of the gage transversely of the support as well as of a swinging movement thereon with the tongue to carry them to one side and remove them from the hem.

The invention also consists in various other constructions and combinations of parts, all as will hereinafter more fully appear.

Referring to the accompanying drawings, which form a part of this specification, Figure 1 is a plan view of a hemmer constructed in accordance with my invention, the several parts being in the positions they occupy during the formation of a hem; Fig. 2, a similar view of the hemmer, with the gage which determines the width of the hem and the tongue which coöperates with the edge-turner swung back out of their operative positions and in the relation they will occupy, for instance, when the finishing of a hem around a tubular article is being effected; Fig. 3, a bottom view

of the hemmer; and Fig. 4, a longitudinal sectional elevation thereof, taken in the plane $x x$ in Fig. 3, with a portion of the gage which determines the width of the hem broken out for convenience in illustration.

In all the figures like letters of reference are employed to designate corresponding parts.

A indicates the support upon which the various parts of the hemmer are or may be mounted. This support may be constructed in various forms to suit the hemmer to the particular location in which it is to be employed. In the embodiment of the invention here shown, however, it is constructed in the form of a presser-foot, the purpose of which in the formation of hems it will serve, and it is provided with a suitable arm whereby to secure it to the presser-bar or other appropriate part of a sewing-machine and with an orifice a through which the needle will descend when such machine is in operation.

B indicates the gage over which the folding of the material to form the hem is effected and by means of which the width of the latter is determined. In the construction of the gage various forms may be adopted, it only being essential that, whatever its form, it be provided with an appropriate edge b over which the material may be folded, and with a body portion upon which such edge is formed or from which it is supported. In the form of the invention shown in the drawings, however, which is the one I prefer in practice, this gage is constructed from sheet metal of a general L shape, with the edge b extending along its shorter arm and with the body portion, constituting the longer arm thereof, extending backward from such edge at approximately right angles thereto and provided with a longitudinal slot c . As thus constructed this gage is secured to the support A in such a manner as to be capable of both a movement transversely of the latter, to adapt the hemmer to the formation of hems of different widths, and of a swinging movement thereon to permit of its removal from the hem when required. The means whereby this securing is effected consists of the block C, upon which the gage is fitted to slide to which it is clamped when in adjusted position. This block is jointed to the support A

by a screw *d*, or other equivalent device, which may enter either the body of such support or an arm *e* extending therefrom, as preferred. In the construction of this block, the form that will best suit it to the particular form of gage in connection with which it will be used will be adopted and the forms of the devices for clamping the gage thereto will be similarly determined. When employed, however, with the form of gage illustrated in the drawings, the block C is preferably constructed of a contour to fit the longitudinal slot *c* in the gage and permit of such gage by means of its slot sliding back and forth along the block as the adjustment of the gage may require, and the devices whereby the gage is clamped to such block are preferably constructed in the form of a screw *f*, which extends downward through the slot *c*, and, engaging with a suitably-threaded orifice in the block, firmly clamps between the under side of its head and the enlarged plate *g* on the under side of said block the gage which rests between them. The gage B being thus secured to the support A may be swung around either across the same, as illustrated in Fig. 1, or back to one side thereof, as illustrated in Fig. 2, the limits of its movements in one and the other directions being determined by the shoulders or stops *h* and *i*, respectively, which are or may be secured to or formed on the said support. When swung around into the first-mentioned position, the parts are in the relation they occupy during the formation of a hem, the edge *b* thereon being then disposed in parallelism to the line of feed of the sewing-machine. When, on the other hand, the gage is swung back into the last-mentioned position, the parts are in the relation they occupy when the gage is removed from the hem, as in the completion of a hem around the end of a tubular article.

For turning under the edge of the material folded back to form the hem and laying it in proper position to receive the line of stitching the edge-turner D is employed. This edge-turner may be constructed in accordance with any of the well-known forms of such devices heretofore in use and may be formed either integrally with the support A or separate therefrom and secured to it, as may be preferred. In the form selected for illustration of the invention, however, it consists of a plate which is fixedly secured to the front of the support A and extending laterally across the same has the portion *m* thereof curved downward and backward in hook form, with the outer edge of such plate, from the point *l* to the extremity of the portion *m*, inclined inward in a direction oblique to the line of travel of the material as it passes through the hemmer. As thus constructed, the downward and backward curved portion of the turner engages with the edge of the material as it passes through the space formed thereby and not only turns it down and under upon the surface of the material

to which it is to be secured, but guides it to the needle-hole *a* in the support A, and hence to the needle of the sewing-machine, in proper relation to receive the line of stitching *s* at the edge thereof, being aided in its operation by the inclined edge with which the turner is provided.

Coöperating with the edge-turner is a tongue E, which, extending into the same, is adjustable toward and from the operative surface thereof to adapt the hemmer to form hems in materials of different thicknesses with equal efficiency, and likewise removable, whereby to permit of the formation of hems without its presence, as is sometimes necessary or desirable. This tongue may be secured to the support A or to any other convenient part of the hemmer, it only being essential that, to whatever part secured, it be firmly held in position and be capable of adjustment toward and away from the operative surface of the turner in connection with which it is employed, as well as removable therefrom, as occasion may demand. It is preferred, however, with the form of hemmer shown in the drawings to secure it to the block C upon which the gage B is carried, in order to permit of its swinging back and forth from and into the turner with such gage as the latter is swung back to one side of the support A to carry it away from the hem or forward across the same when its presence in the formation of a hem is desired. For effecting this securing of the tongue to the block C the tongue is preferably constructed with a support *n*, which is arranged at approximately right angles thereto and is provided with a suitably-threaded orifice for the reception of a screw *o*, which, passing downward through a slot *p*, formed in the block C, engages therewith and firmly holds the tongue in place on such block, while yet permitting of its adjustment thereon and removal when required. This, however, is but one of a number of different arrangements that may be adopted for securing it thereto, and various modifications thereof may be made—as, for instance, instead of having the threaded orifice for the screw *o* formed in the support *n* and the slot *p* formed in the block C these may be reversed and the threaded orifice formed in the block and the slot formed in the support, if desired.

The hemmer being constructed as above explained and applied to the presser-bar or other convenient part of a sewing-machine, with the gage B properly adjusted to form a hem of the required width and swung around across the support A until the edge *b* thereon is brought into parallelism to the line of feed of the machine, as illustrated in Fig. 1, the formation of hems therewith will be as follows: The material F, upon which the hem is to be formed, is first passed under the support A, and the other parts of the hemmer carried thereon and folded back upon itself over the edge *b* of the gage B in a line parallel thereto. The inner edge *r* of the portion so folded back is

then carried around the tongue E and through the edge-turner D, and moved forward into engagement with the sewing-machine feed.

The sewing-machine is then started and as a result thereof the material is fed through the hemmer beneath the support A, and the edge *r* of the portion folded back over the edge *b* of the gage B by the hand of the operator, turned down and under, and delivered in proper relation to the needle to receive a line of stitching *s* therein by the edge-turner D and the tongue E as it passes between them, the folding of the material back over the edge *b* of the gage B being accomplished by the hand of the operator, and the turning down and under of the edge *r* thereof and its delivery in proper relation to the needle being effected by the turner and the tongue therein.

The formation of the hem will thus continue until it is completed, with the several parts occupying the positions illustrated in Fig. 1, unless an obstruction arises therein which necessitates the withdrawal of the gage B from the hem, as is the case at the completion of a hem around the end of a tubular article—as, for instance, a pillow-case—when the gage with the tongue E will be swung back to one side of the support A, or in the position shown in Fig. 2, and the hem completed while they occupy that position.

It will thus be seen from the foregoing that I produce a hemmer which is not only simple in construction and capable of use in connection with materials of different thickness, but one which is adapted to the formation of hems of different widths, and that, too, upon the ends of tubular articles without in any way interfering therewith.

Although in the above I have shown and described the adjustable and removable tongue E as applied in connection with a form of hemmer that is adapted to the formation of hems of different widths, it is obvious that its use is not limited thereto, but the same is capable of general application in other hemmers and also in fellers wherein equivalent combinations to those herein claimed are used and operated with equal efficiency.

Having now described my invention and certain of the ways in which it is or may be carried into effect, I claim—

1. The combination with a support of a sewing-machine hemmer, and an edge-turner arranged thereon, of a gage over which the material is folded to form the hem, a tongue for the turner, and means for connecting such gage and tongue to the support, whereby to permit of an adjustment of the gage transversely of the support as well as of a swinging movement thereon with the tongue to carry them to one side of such support and thereby remove them from the hem, substantially as described.

2. The combination of the support of a sewing-machine hemmer adapted to act as a presser-foot, and an edge-turner arranged

thereon, a gage over which the material is folded to form the hem, a tongue for the turner, a block upon which the gage may be adjusted to vary the width of the hem, and to which the tongue is secured, jointed to the support whereby to swing thereon and carry such gage and tongue to one side of the support to remove them from the hem, and means for clamping the gage to said block, substantially as described.

3. The combination of the support of a sewing-machine hemmer adapted to act as a presser-foot, an edge-turner arranged thereon, a gage over which the material is folded to form the hem and provided with a slot in its body portion, a tongue for the edge-turner, a block, arranged in the slot in such gage, and adapted to slide therein and jointed directly to the support whereby to swing upon the same to carry the gage and tongue to one side of the support and thereby remove it from the hem, and a clamping-screw for clamping the gage to the block, substantially as described.

4. The combination of the support of a sewing-machine hemmer, a gage over which the material is folded to form the hem, a block upon which the gage is adjusted and to which it may be secured, jointed directly to the support whereby to swing thereon and permit of the gage being carried across such support and into the hem, or to one side thereof to remove it wholly therefrom, and stops on the support for limiting the swinging movements of such gage on the support in both directions, substantially as described.

5. The combination of the support of a sewing-machine hemmer, an edge-turner arranged thereon, a gage over which the material is folded to form the hem, a block to which such gage is adjustably secured, jointed to the support, and a tongue for coöperating with the edge-turner adjustably secured to the said block whereby to be adjustable toward and away from the operating-surface of the edge-turner and be capable of a swinging movement with such block, substantially as described.

6. The combination of the support of a sewing-machine hemmer, an edge-turner arranged thereon, a block jointed to such support whereby to have a swinging movement thereon, a tongue for coöperating with said edge-turner, and means for adjustably and detachably securing the tongue to such block thereby to permit not only of the swinging of the tongue into and from the turner, and its adjustment toward and away from the operating-surface thereof, but also of its removal from the block, substantially as described.

In testimony whereof I have hereunto set my hand this 1st day of April, 1895.

ALEXANDER LAUBSCHER.

Witnesses:

ISAAC HOLDEN,
A. E. PORTER.