

(No Model.)

W. S. CARLISLE.

RUFFLING ATTACHMENT FOR SEWING MACHINES.

No. 282,843.

Patented Aug. 7, 1883.

Fig 2.

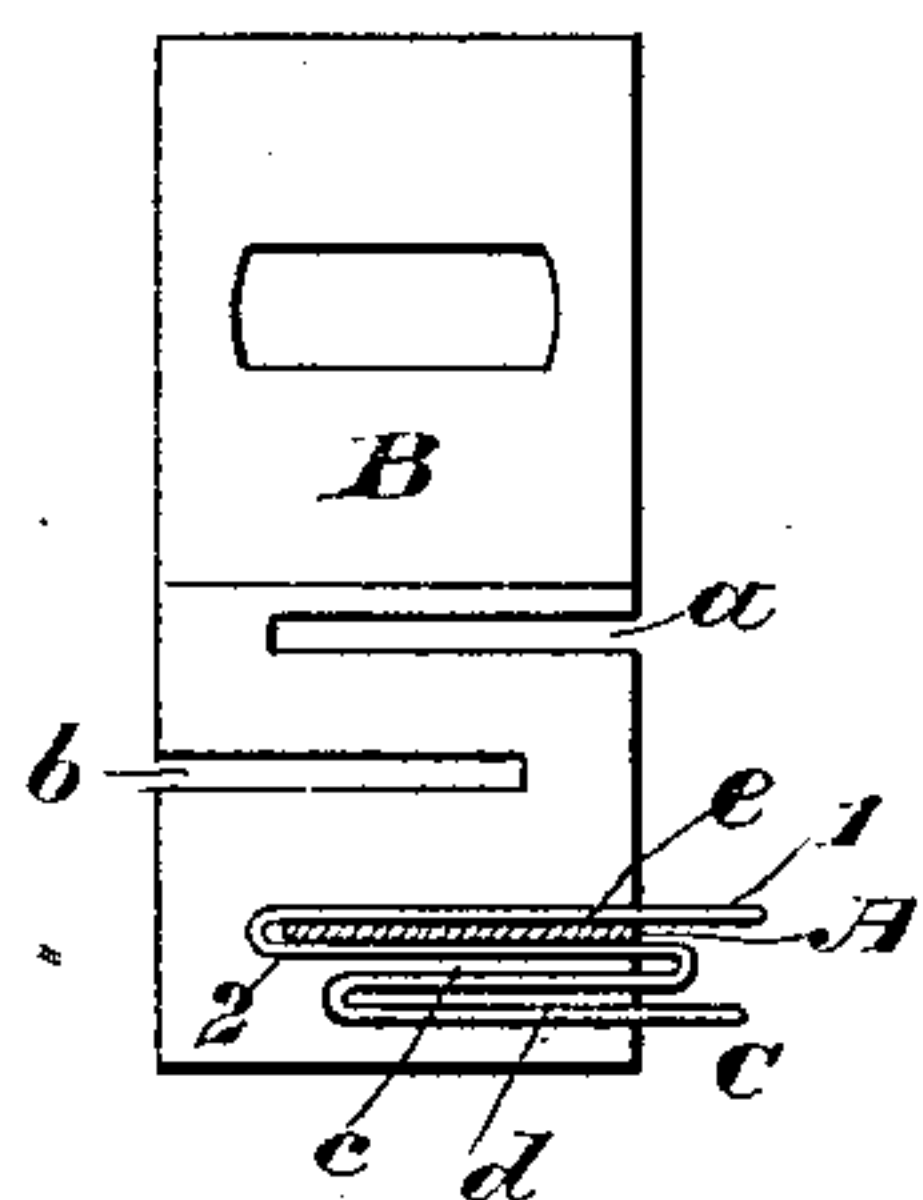


Fig 3.

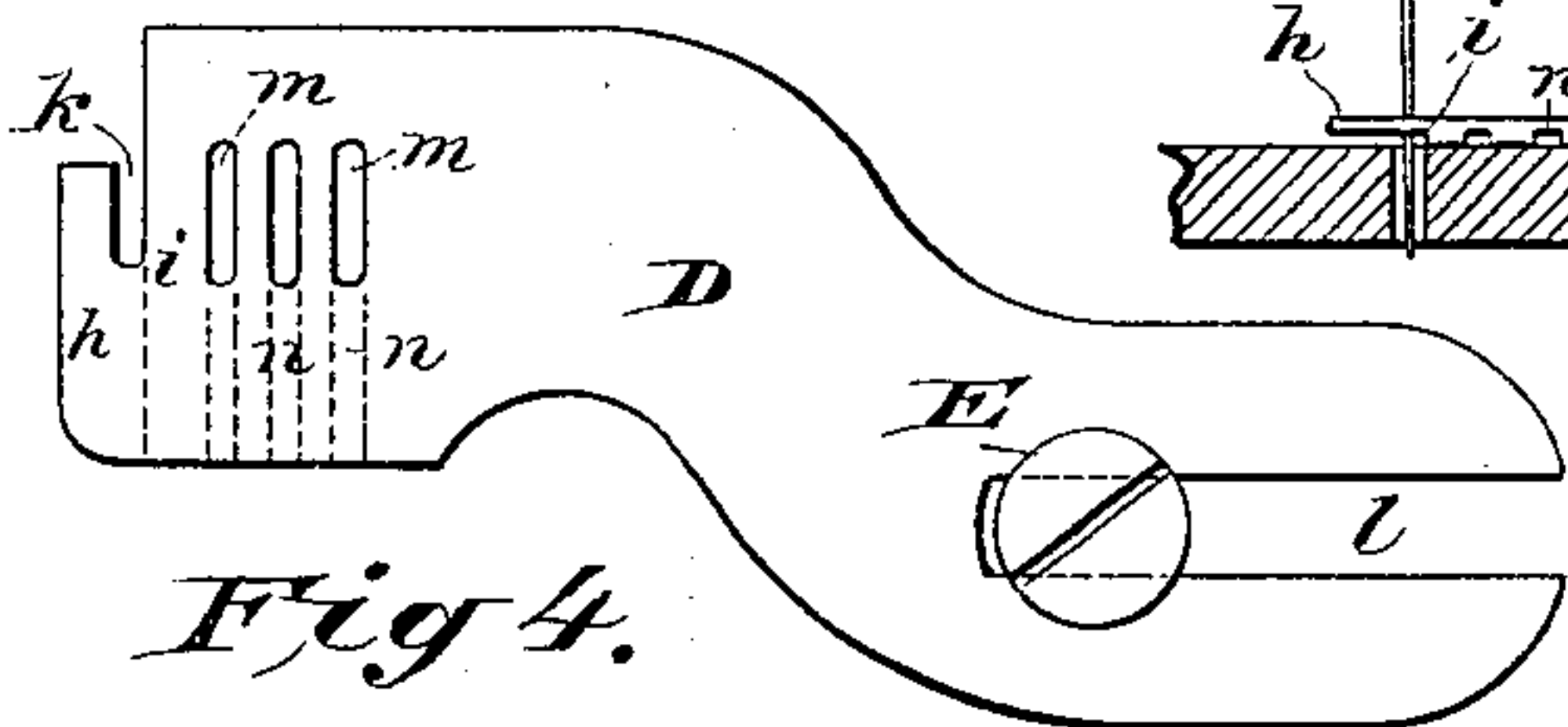
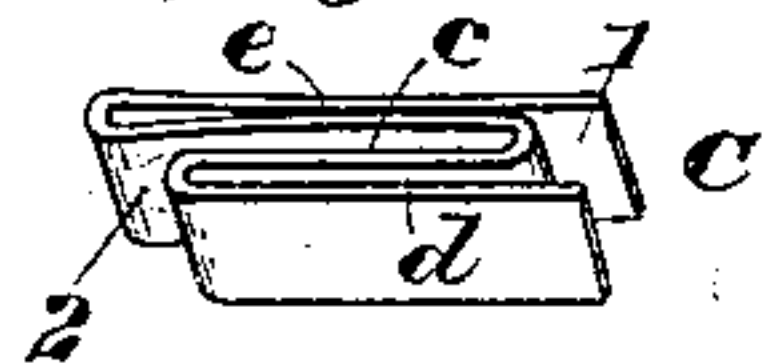


Fig 1.

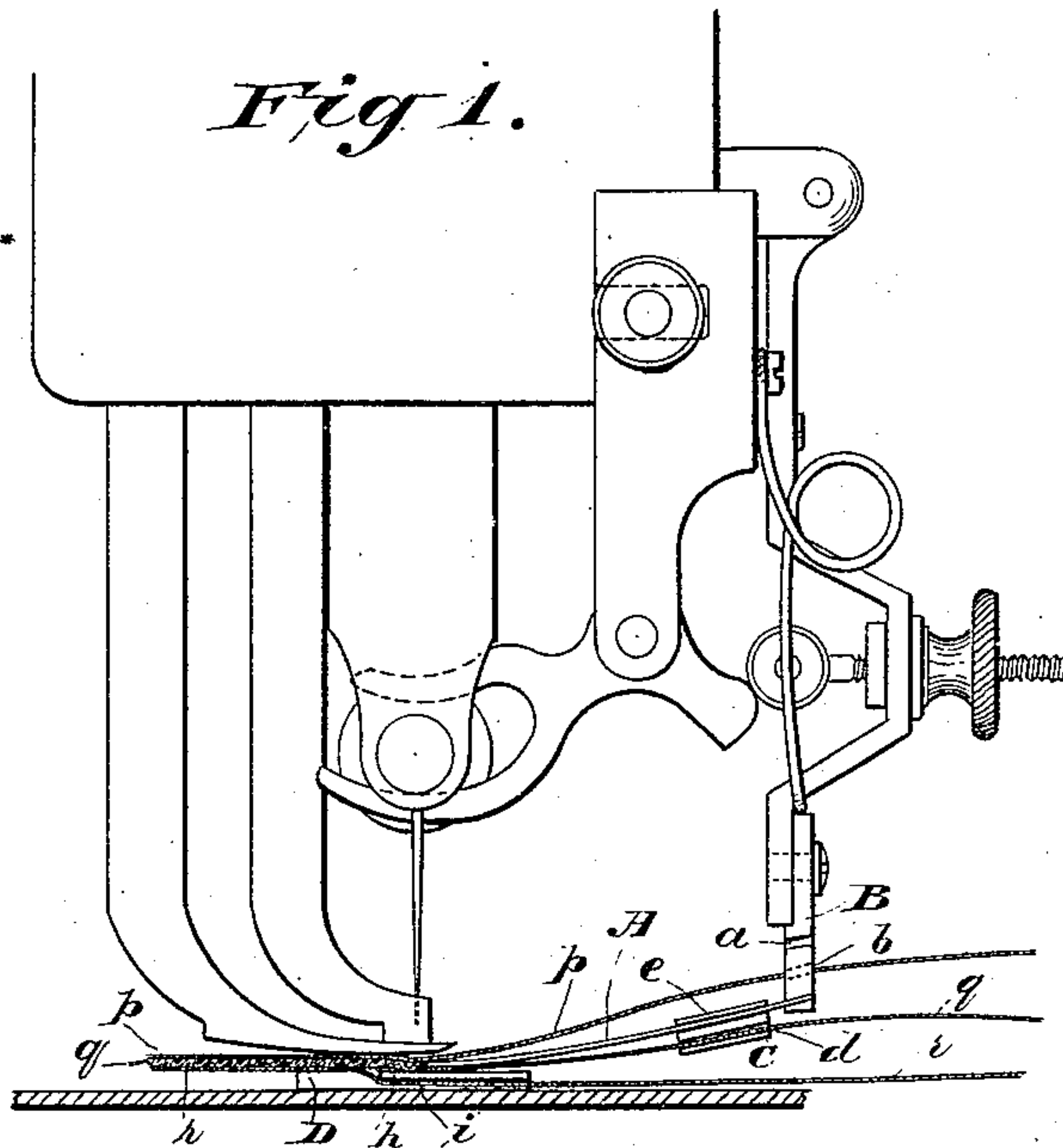


Fig 5.



Fig 6.

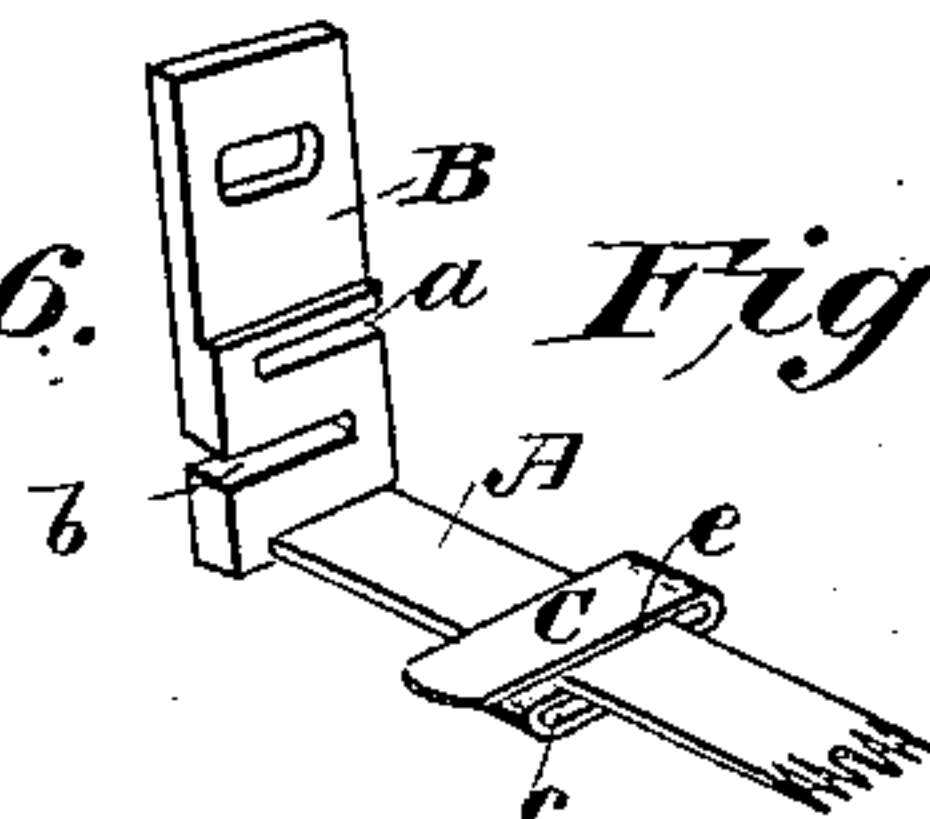


Fig 7.

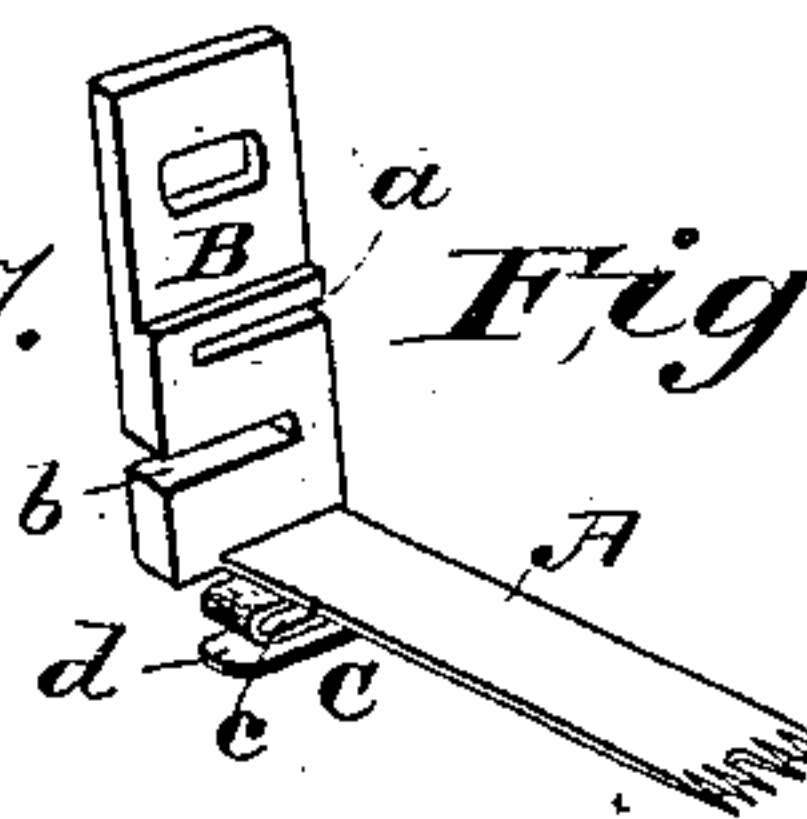


Fig 8.

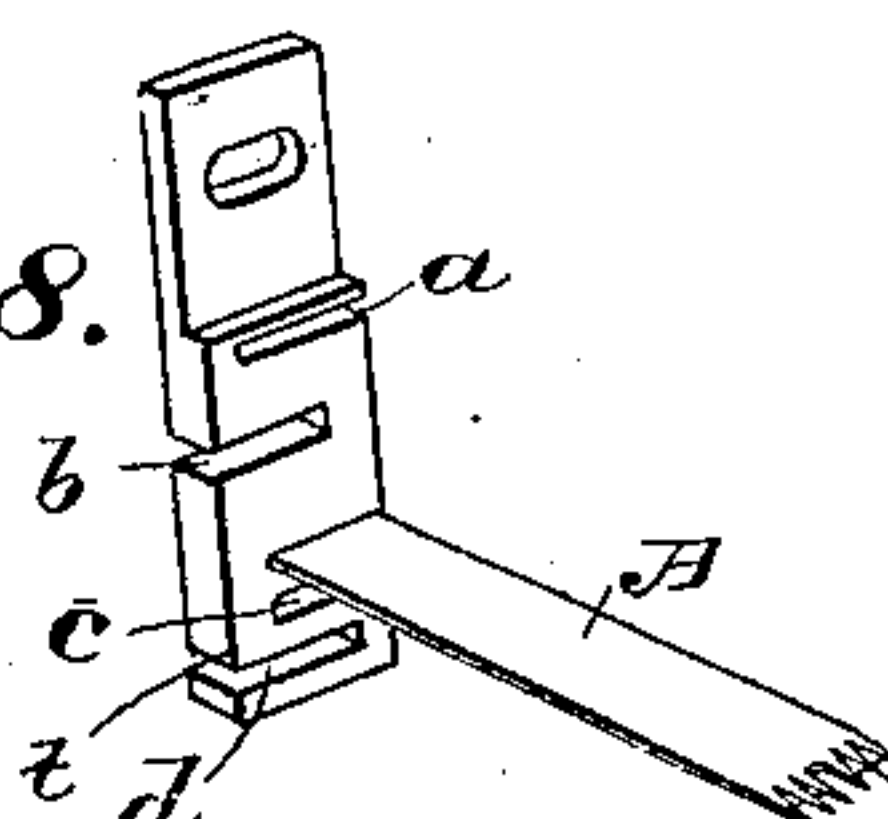


Fig 9.

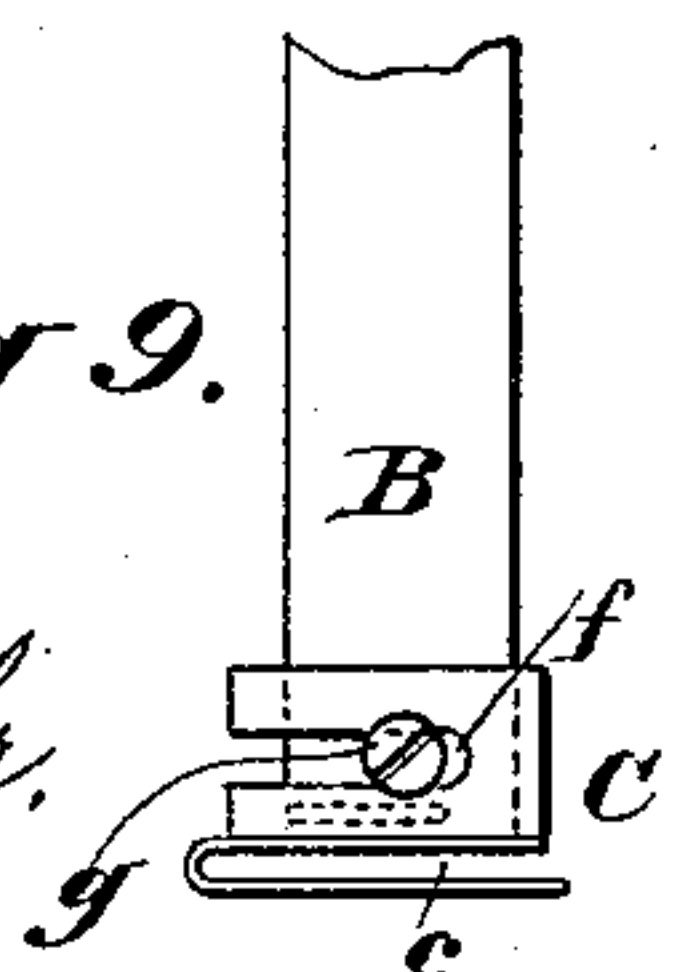
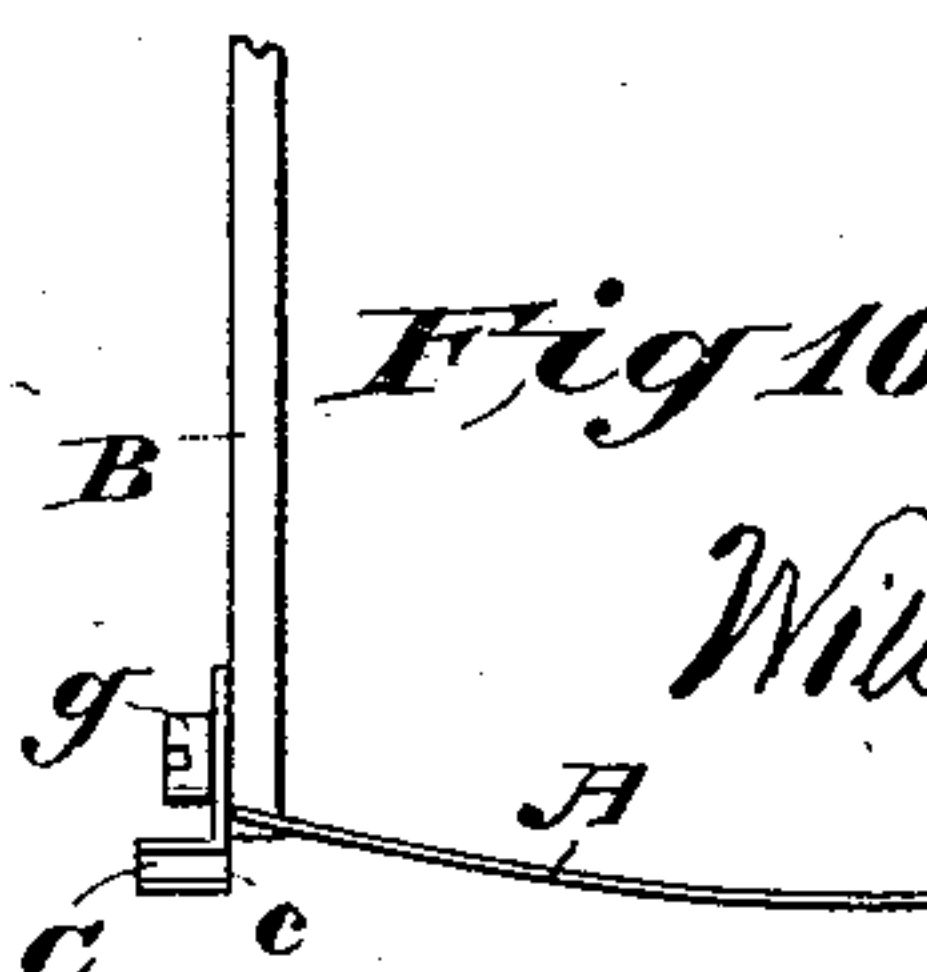


Fig 10.



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UNITED STATES PATENT OFFICE.

WILLIAM S. CARLISLE, OF WATERTOWN, NEW YORK.

RUFFLING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 282,843, dated August 7, 1883.

Application filed March 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. CARLISLE, of Watertown, in the county of Jefferson and State of New York, have invented a new and useful Improvement in Guides for Ruffling or Gathering Attachments for Sewing-Machines and for other purposes, which improvement is fully set forth in the following specification.

This invention has for its object more particularly to facilitate the performance of a large range of work with ruffling or gathering attachments; and it relates to means for guiding the strip to be ruffled, and also for guiding the bands to or between which the ruffled strip is to be sewed.

The means for guiding the strip to be ruffled embodies in its most complete form several improvements, as follows: first, the construction of a slotted guide adjustable across the ruffler-blade, or transversely to the length of the blade, so as to vary at will the distance of the line of sewing from the edge of the ruffled strip; second, the construction of a slotted guide with slots turned in opposite directions, so that either edge of the ruffled strip may be guided by placing it in the appropriate slot; third, the adjustment of the double slotted guide transversely to the ruffler-blade; fourth, certain particular constructions and combinations, hereinafter specified.

The means for guiding the lower one of the bands to which the ruffled strip is to be sewed also embodies several improvements in its most complete form—to wit, the combination of an attaching-plate and an edge-guide and separator with the guiding-edge below the separator, and in such relation to the attaching-plate that when the latter is secured in place on the sewing-machine it is on the same side of the needle as the goose-neck or stationary arm of the said machine; also, the construction of the attaching-plate so that it may be secured upon the bed-plate of the sewing-machine by a set-screw, (the usual means for securing machine attachments,) and also the formation, in the attaching-plate carrying the edge-guide and separator, of one or more slots or recesses for guiding a braid or cord, so that the said device may be used as a braider or corder when desired. The ruffler-blade works down upon the top of the separator, and the ruffled strip passes

between the two, while the lower band passes below the separator and is guided by the edge-guide. The slotted guide for the ruffled strip holds it up from the work-plate clear of the lower band.

The two devices above indicated are or may be used together, and in connection with them, or either of them, guides for the upper band may be used. The invention includes the combination of such guides with the guides for the ruffled strip or for the under strip, or for both.

In the accompanying drawings, Figure 1 shows in side elevation a ruffling or gathering attachment secured upon a sewing-machine, and provided or combined with guides constructed in accordance with the invention, the ruffled strip and upper and lower bands being represented in the guides. Fig. 2 is a sectional elevation in a plane transverse to the ruffler-blade, showing the guides for the upper band and ruffled strip, together with the ruffler-blade and a portion of its carrier; Fig. 3, a perspective view of the guide for the ruffled strip detached; Fig. 4, a plan of the guide for the lower band; Fig. 5, a front elevation of the same; Figs. 6, 7, and 8, perspective views of other forms of the ruffled-strip guide, and Figs. 9 and 10 elevations of still another form of guide.

The sewing-machine and ruffling or gathering attachment illustrated in Fig. 1 are those manufactured and sold by the Davis Sewing Machine Company, of Watertown, New York, and, being in common use, need not be described.

A is the ruffler-blade, fixed at the front end, or end nearest the operator, to the piece B, which forms part of the vibratory blade carrier.

C is the guide for the ruffled strip, and D the guide for the under or lower band. The guide for the upper band is formed in the piece B, the same being provided with the guiding-slots *a b*, open at opposite ends, as customary in the rufflers used on the Davis sewing-machines.

The guide C for the ruffled strip, as shown in Figs. 1, 2, and 3, is formed of a strip of metal folded upon itself, so as to form two guide-slots, *c d*, open at opposite ends, and an attaching-clip, *e*. The latter is designed to be slipped over the ruffler-blade and to retain

the guide in place in virtue of its elastic pressure thereon. Its length is greater than the width of the ruffler-blade, so that it may be adjusted across the same and still retain a secure hold. The metal forming the clip preferably projects also beyond the closed ends of the guide-slots, as shown at 1 2, Figs. 2 and 3, so as to maintain a secure hold upon the ruffler-blade when the guide has been so adjusted as to bring the said closed end under the ruffler-blade. This adjustment is to be made when the ruffle is to be stitched very near its edge.

The object of having two guide-slots, *c d*, is to enable the ruffled strip to be inserted from either side, so as to guide either the right or the left hand edge of the strip, and also to allow two strips to be guided at the same time, if desired.

In Fig. 6 the guide is formed of a strip bent upon itself, and comprises a single guide-slot, *c*, and a clip, *e*. This guide can be used to guide the ruffled strip on either side of the line of sewing by reversing its position on the ruffler-blade, the clip *e* being capable of application from either side of the ruffler-blade. With the double slotted guide reversal is not necessary for this purpose, although it may of course be resorted to whenever desired. As the single guide allows more room under the ruffler-blade, it may often be preferable to use it rather than the double guide, and as in some cases of rufflers it may not be convenient to insert the guide except from one side, the guides can be made right and left. As in the double guide, the clip is of sufficient length to allow the adjustment of the guide across the ruffler-blade, and there is preferably a projection beyond the closed end of slot *c*.

In Figs. 9 and 10 the guide has one guide-slot, *c*, and an upright slotted plate, *f*, by which it is secured to the piece B by a set-screw, *g*. The slot in the plate *f* permits the adjustment of the guide-slot transversely to the ruffler-blade. In all these adjustable guides the guide-slots are preferably wider than the ruffler-blade, so as to give a broad support to the ruffled strip.

In Fig. 7 the guide C is formed of a bent strip of metal, and is provided with two reversed guide-slots, *c d*, open at opposite ends. It is soldered to the ruffler-blade, and is therefore not adjustable nor reversible.

In Fig. 8 the piece B has an extension, *t*, below the ruffler-blade, and two reversed guide-slots, *c d*, are formed therein. Heretofore one such guide-slot has been made in a shorter extension of the piece B.

The guide D for the lower band is a plate provided at the end with an extension, *h*, of less thickness than the body thereof, so as to leave below said extension a vertical end wall, *i*, which serves as a guiding-edge. The thin extension holds down the lower band and acts as a separator to separate it from the ruffler-

blade, which works down upon the top surface of said extension or separator and upon the adjacent surface of the plate. The guide D is thus a combined edge-guide and separator. It is slotted at *k* for the passage of the needle.

A slot, *l*, serves to receive the set-screw whereby the guide D is secured to the work-plate of the sewing-machine in the ordinary manner of securing sewing-machine attachments. In the plate of said guide are a series of slots, *m*, and grooves *n*, of different widths, for guiding braid or cord to the needle. The same attachment may therefore be used also as a braider, the slot *l* being of sufficient length to allow such adjustment of the attachment as to bring any one of said slots *m* under the needle.

The braid-guides do not interfere with the use of the attachment as an edge-guide and separator. They may be omitted altogether, if desired, or their number could be diminished or increased. When not used, or when their number is diminished, the slot *l* may be shortened. One or more holes could be used for receiving the screw E, instead of a slot, as shown.

In the use of the attachment D as a braider, it is or may be independent of the ruffler; or the latter may be used with it when a ruffle is to be stitched to a braid.

The operation of forming a ruffle and stitching it between bands is as follows: The upper band, *p*, is inserted in one of the upper slots, *a b*, and is led over the top of the ruffler-blade and under the needle and presser-foot. The ruffled strip *q* is inserted in one of the guide-slots *c d*, the guide C, when adjustable, being set in the proper relation to the ruffler-blade. The lower band, *r*, is placed under the separator or extension *h*, with its inner edge against the guiding-wall *i*. The machine being started, the strip *q* is ruffled and stitched between the bands *p r*, all of them being guided by their appropriate guides without special care on the part of the operator. The lower band is drawn up by the stitching through the needle-slot *k*. By placing the ruffled strip in the proper one of the two guide-slots, or by disposing the guide with reference to the ruffler-blade when reversible, the fullness of the ruffle may be on whichever side of the line of stitching it may be preferred to lay it. By adjusting the guide the line of stitching may be made a greater or less distance from the edge. The ruffled strip, being supported in the guide-slots, is held up from the bed-plate and from the lower band.

When either or both the guides C D are not required, they may be removed, provided always that the guide C is one of the removable forms. The guide for the lower band, it will be seen, has, as shown, the guiding-edge wall *i* on the same side of the line of stitching with the goose-neck. This is advantageous because it allows the edge of a skirt or similar large piece of work to be edge-stitched and ruffled

without passing the main body of the work under the goose-neck or stationary arm. The guide D could be usefully employed without a ruffler or gatherer, as well as in connection with it, although mainly designed for the latter use. The ruffler need not be of the construction shown in the drawings, but may be of any ordinary or suitable construction; and it may be provided or not with guides for the ruffled strip and upper band, either or both. The ruffled-strip guide C can be used in connection with any ordinary or suitable gathering attachment—as, for example, on the Johnston or Toof ruffler—and it may be secured to other parts of the ruffler than the ruffler-blade by means of a spring or other clip, a straddle and set-screw, or otherwise, so as to be adjustable, reversible, removable, or fixed, as hereinbefore described with reference to the guides shown. When the ruffler-blade works upward against the bottom of the presser-foot or other overlying surface, the ruffled-strip guide would be so attached as to be above the ruffler-blade.

A device similar in configuration to the adjustable and removable guides described could be used to guide the upper band. It would then be on the opposite side of the ruffler-blade from the ruffled strip, and would not of course be a ruffled-strip guide. Such a device might also be used independently of a ruffling attachment—in other attachments, for example.

The terms “strip” and “band” as herein used may refer to pieces of any width.

More than two guide-slots could be provided for the ruffled strip.

Having now fully described my said invention and the manner of carrying the same into effect, what I claim is—

1. A reversible ruffled-strip guide for ruffling or gathering attachments, the same being provided with one or more guide openings or slots, and being supported by the frame of the attachment, substantially as described.

2. A reversible and adjustable ruffled-strip guide, substantially as described.

3. A reversible and adjustable ruffled-strip guide having one or more slots open at one end, substantially as described.

4. A guide comprising two or more slots, open at opposite ends, and means for fastening the same to a ruffling or gathering attachment, so that the same is removable, reversible, and adjustable, and has the two slots on the same side of the ruffler-blade, substantially as described.

5. The combination, with the ruffler-blade and other parts of a ruffling or gathering attachment adapted to be supported from the head or goose-neck of the machine, of a ruffled-strip guide comprising two or more guiding-slots, open at opposite ends, and secured to said attachment with its two guide-slots below the ruffler-blade, substantially as described.

6. An adjustable guide for ruffling or gathering

attachments, having an attaching-clip longer than the width of the ruffler-blade, substantially as described.

7. An adjustable guide for ruffling or gathering attachments, having one or more guiding-slots of greater width than the ruffler-blade, substantially as described.

8. The combination, in a ruffling or gathering attachment, of an adjustable guide for the ruffled strip and a guide for a band, said guides being on opposite sides of the ruffler-blade, substantially as described.

9. The combination, with the ruffler-blade, of the reversible ruffled-strip guide and the band-guide on opposite sides of said blade, substantially as described.

10. The combination, with a ruffler-blade, of guides on opposite sides of the same, each adapted to guide either edge of a piece of goods, substantially as described.

11. The combination of the guides for the upper and lower bands with an adjustable guide for the ruffled strip, substantially as described.

12. The combination of the two band-guides with the ruffled-strip guide adapted to guide either edge of said strip, substantially as described.

13. The combination, with an adjustable ruffled-strip guide for guiding either edge of said strip, of one or more band-guides, substantially as described.

14. A separator and edge-guide consisting of a plate provided with an extension of less thickness than the body of the plate, so as to leave below said extension a guiding-edge, said plate being adapted for attachment by the usual set-screw to the cloth-plate of the machine, substantially as described.

15. A separator and edge-guide consisting of a plate with an extension of less thickness at the end thereof, and a guiding-edge below said extension, and a needle-slot at one edge of said plate, said parts being arranged as explained, so that when secured on the machine the guiding-edge will be on the goose-neck side of said slot, substantially as described.

16. A separator, edge-guide, and braid-guide consisting of a plate provided with an extension of less thickness than the body of the plate, and provided with one or more slots to serve as braid-guides, substantially as described.

17. The combination of the separator and edge-guide formed of a plate with an extension of less thickness than the body of the plate, and a guiding-edge below said extension, with a ruffled-strip guide, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM S. CARLISLE.

Witnesses:

JAMES C. BURT,

LEVI A. JOHNSON.