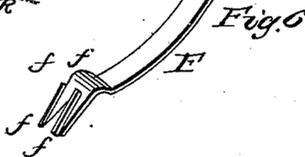
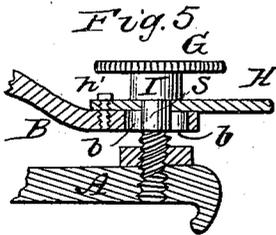
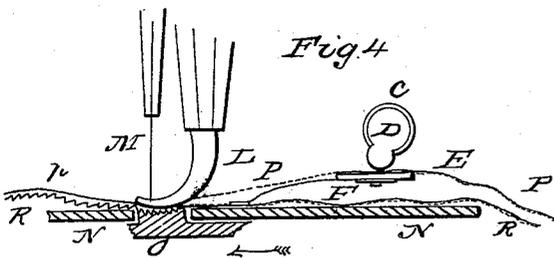
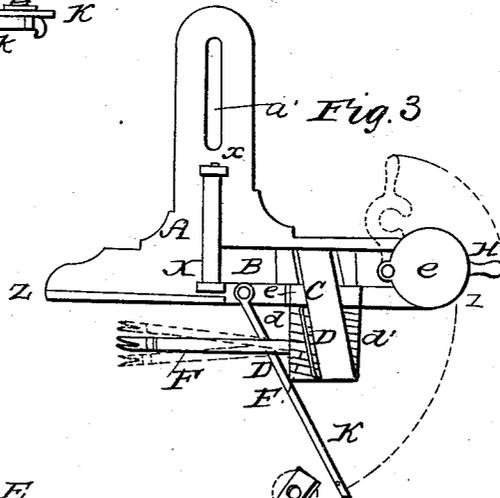
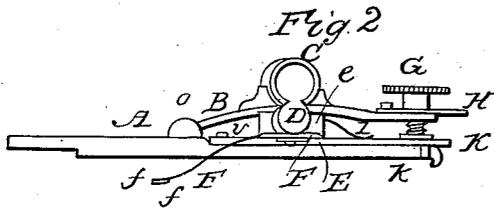
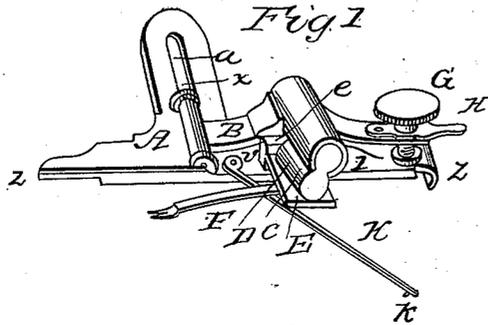


BROOKS & MANNING.

Sewing Machine Ruffler.

No. 84,676.

Patented Dec. 8, 1868.



Witnesses

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REUBEN BROOKS, JR., AND WILLIAM N. MANNING, OF ROCKPORT,
MASSACHUSETTS.

Letters Patent No. 84,676, dated December 8, 1868.

IMPROVEMENT IN RUFFLING-DEVICE FOR SEWING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, REUBEN BROOKS, Jr., and WILLIAM N. MANNING, both of Rockport, in the county of Essex, and State of Massachusetts, have invented a new and useful instrument called a Ruffler, and designed as an attachment to sewing-machines; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of these specifications.

This invention relates to a new and improved instrument for the purpose of facilitating the process of "gathering and sewing on at one operation," otherwise called ruffling; and

The invention consists in providing an adjustable tension for the upper cloth or band, and also in means for guiding the edges of the cloth against the gauge, as hereinafter described.

Figure 1 represents a perspective view of the instrument above referred to.

Figures 2 and 3 are vertical and horizontal projections.

Figure 4 shows the manner of operation.

Figure 5 shows the manner in which the tension of the upper cloth is adjusted, and the arrangement for releasing the tension without turning the tension-screw G.

Figure 6 is an inverted view of the spring-guide F. Similar letters indicate corresponding parts.

A represents the plate or bed of the instrument, which is attached to the cloth-plate of the sewing-machine by means of a thumb-screw passing through the slot *a'*, by which, also, the width of the seam taken can be regulated.

This instrument is attached to the sewing-machine in the same place and manner as the common flat gauge, and requires no alteration whatever to the sewing-machine.

It can be made either right or left-handed, to suit the direction of feed of different sewing machines.

B represents the tension-bar, which is attached to the plate A by the axle *x z*.

C is the cylinder which holds the "presser" D, and is attached to and forms part of the tension-bar B.

The tension upon the upper cloth is produced by the friction of the "presser" D upon the cloth, P, while passing over the tension-plate E, (see fig. 4,) and the degree of tension is regulated by the thumb-screw G.

The cylinder C and presser D are inclined obliquely to the line *x z* of the gauge-plate A, (see figs. 1 and 3,) and the tension-plate E is marked with oblique lines or grooves, *d d'*, fig. 3, for the purpose of keeping the edge of the cloth P against the guide *e*.

The spring-guide F is secured to the under side of the tension-plate E in such a manner as to permit of its

being adjusted to bear upon the cloth at any angle required, as shown in fig. 3, and its free end is out obliquely, and the edges *f f* turned down, as shown in fig. 6, in such a manner that when in operation it shall tend to keep the edge of the under cloth against the edge *z z* of the plate A.

K is a movable guide, swinging upon a pivot, V, and provided with a short pin, *k*, which presses upon the cloth-plate of the sewing-machine; and between this pin and the edge *z z* of the plate A, the under cloth passes. Its object is to insure the proper position of the under cloth upon the machine without the attendance of the hand.

If wide fabrics are to be sewed, this guide-bar K can be swung upon its pivot V until in the position indicated in fig. 2, when it is entirely out of the way.

By keeping the bar K in the position in fig. 2, and passing both pieces of cloth under the tension-plate E and spring-guide F, the whole instrument can be used as a simple gauge for plain sewing, the spring-guide F taking the place of and dispensing with the use of the instrument called a "self-sewer."

Whenever a new piece of cloth is to be inserted between the presser D and the tension-plate E, it is necessary that the presser should be removed from contact with the tension-plate, and, in order that this may be done without changing the tension-screw G, the end of the tension-bar B is provided with a hole, *b*, of sufficient size to slide freely over the collar T of the screw G, fig. 5, and this hole is covered by the plate H, which is provided with a slot just large enough to receive the neck of the screw S.

This slotted plate H is pivoted to the tension-bar B at the point *h*, fig. 5.

It will be seen that to release the tension upon the upper cloth, it is only necessary to press slightly upon the end of the plate H, and turn it in the direction indicated by the dotted lines in fig. 3, when the spring I causes the tension-bar B to rise, and removes the presser D from contact with the tension-plate E.

The cloth P can then be inserted, and the plate H pressed downwards and turned back to its first position, as shown in fig. 1, when the tension will be the same as before.

In fig. 5, N represents the cloth-plate of the sewing-machine;

O, the feed-bar;
L, the cloth-presser; and
M, the needle.

In order to "gather and sew on" at the same time, by the common sewing-machine with a single feed, it is necessary that while the lower cloth is allowed to feed freely, the upper cloth should be retarded in its motion to about one-half the speed of the lower cloth. To do this, it is customary to hold the upper cloth P between the thumb and finger, in such a manner as

to permit the proper amount of feed. But this process is a very uncertain and difficult one, as it is almost impossible that the pressure of the fingers should be perfectly regular. It is also very wearisome to the operator to continue the process for any considerable time, as the muscles of the hand become tired, and perfect work is then impossible.

It will also be seen that the hand is not at liberty for other purposes.

In fact, so difficult is the present process, that very few persons can perform the operation at all.

To render the tension above referred to perfectly adjustable and regular, is the object of this invention.

We do not claim the guide-bar K, as a similar arrangement has heretofore been used; neither do we

claim providing the spring F with the projecting edges *ff*; but

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

1. The combination of the bar B, slotted plate H, and screw G, all constructed substantially as described, and for the purpose set forth.

2. The rubber presser D, combined with the bar B and tension-plate E, substantially as specified.

3. The adjustable spring-guide F, in combination with the tension-plate E and presser D, as specified.

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Witnesses:

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