

T. S. HUNTINGTON.

Ruffing Attachments for Sewing-Machines.

No. 137,003.

Patented March 18, 1873.

Fig. 1.

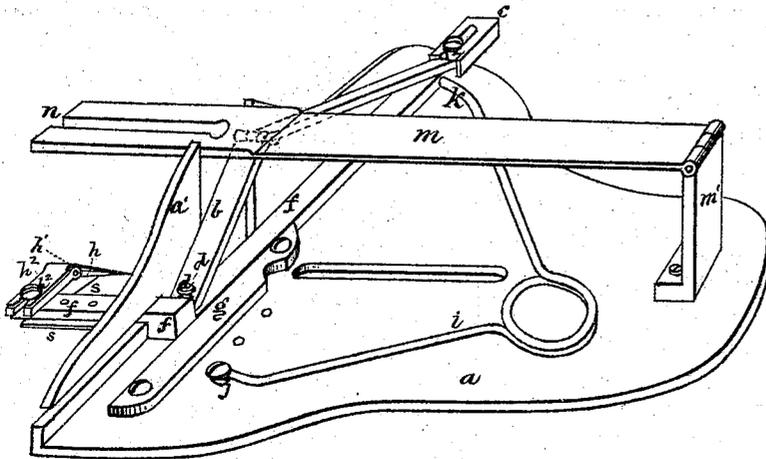


Fig. 5.



Fig. 2.

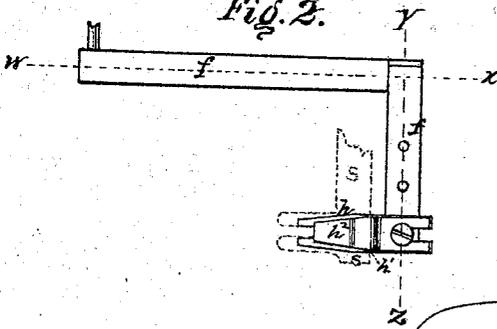


Fig. 6.



Fig. 3.

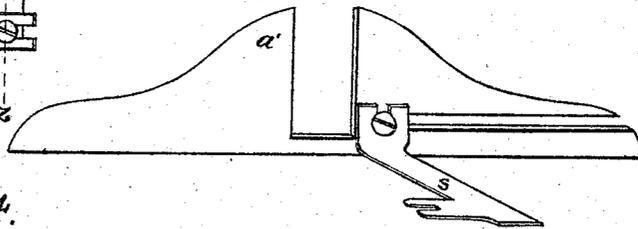
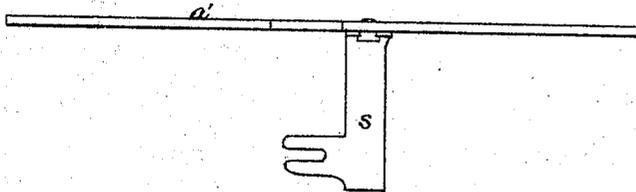


Fig. 4.



Witnesses { *Wm. R. Wright*
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UNITED STATES PATENT OFFICE.

THOMAS S. HUNTINGTON, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN RUFFLING ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 137,003, dated March 18, 1873.

To all whom it may concern:

Be it known that I, THOMAS S. HUNTINGTON, of Baltimore, county of Baltimore, Maryland, formerly of the city of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in the Sewing-Machine Attachment for Fulling, Plaiting, Ruffling, and Gathering, for which I made application for United States Letters Patent on or about June 16, 1870.

The following is a specification of my said improvements, the purpose of which is to give to my above-named attachment the capacity of acting automatically on three (3) strips, pieces, or thicknesses of cloth or other material, in such manner that the middle piece shall be ruffled or gathered while the top and bottom pieces are kept plain and smooth to form a belt, support, or margin for the ruffled or gathered piece, and the three pieces sewed together all at one operation.

My improvements consist in the employment of a hinged-feeder, *h*, in place of the spring-feeder described in my aforesaid application, in connection with a stationary adjustable guard, as hereinafter described, and also in the employment of a hinged-bar, *m*, in connection with these devices, in place of the lever described in my said application as the spring-lever *m*.

In the drawing, Figure 1 is a perspective view of the improved attachment; Fig. 2, a plan of the feed-bar *f*, hinged-feeder *h*, and spring *h*²; Fig. 3, a perspective view of the upright part *a'* of plate *a* and of the guard *s* which is attached thereto; Fig. 4, a plan of the guard *s* and upright part *a'* of plate *a*; Fig. 5, a section of the feed-bar *f* on the line *w x* of Fig. 2; Fig. 6, a section of the feed-bar *f* on the line *y z* of Fig. 2.

a is a plate to which the several parts of the device are attached. *b* is a jointed lever, one end of which abuts against the adjustable stud *c* which is attached directly to plate *a*, the other end of lever *b* being in contact with stud *d* which projects up from feed-bar *f*, the longer leg of which bar slides between the guide *g* and the upright part *a'* of plate *a*, the shorter leg projecting through a slot in the same part of plate *a*, as shown. *i* is a spring,

one end of which is attached to plate *a* at *j*, and the other end to the feed-bar *f* at *k*. *m* is a bar attached by a hinge or other flexible joint to an upright *m'*. The bar *m* is slotted at *n* for the passage of the sewing-machine needle. *h* is the feeder. It is formed of two parts united at *h*¹, Fig. 2, by a hinge to enable it to adjust itself with facility to variations in the thickness of the goods to be ruffled or gathered. *h*² is a spring bearing on the back of feeder *h*. Both the feeder *h* and the spring *h*² are adjustable, being attached to the shorter leg of the feed-bar *f* by a screw through slots, as shown. *s*, Figs. 1, 3, and 4, is a peculiarly formed plate which I denominate a guard. It is stationary, being rigidly attached to the upright part of plate *a*, as shown in Fig. 3, so as to be adjustable to suit the thickness of the goods to be sewed. Its office is to protect the lowermost strip or thickness of goods passing through the device against pressure from the feeder *h* as the goods to be ruffled or gathered and sewed are advanced by the feed motion of the sewing-machine. The guard *s* is forked or recessed as shown, so that it shall be clear of all connection with or bearing on the feed-dog of the sewing-machine, while at the same time its two prongs shall completely guard the lowermost piece of goods from contact with the hinged feeder *h*.

In my device, the strip to be ruffled or gathered always passes between the hinged feeder *h* and the guard *s*; and in operating the device when three pieces or thicknesses are intended to be sewed together so that there shall be a ruffle attached to a belt, one strip is caused to pass under the guard *s*, another between the guard and hinged feeder *h*, and the third strip-piece or thickness over said feeder, all passing at the same time under the presser-foot of the sewing-machine. If the bottom one of the said three pieces is omitted the middle piece is ruffled or gathered and sewed to the top piece, which remains plain. And if the top one of the three is omitted, leaving the middle and bottom pieces, the middle piece is ruffled or gathered and sewed to the bottom piece, which remains plain.

I claim—

1. The guard *s* in combination with the re-

reciprocating hinged feeder *h*, spring *h*², and feed-bar *f*, all constructed and arranged on the supporting-bed having the vertical guiding-face, in the manner and for the purpose substantially as set forth.

2. The hinged bar *m*, jointed lever *b*, adjustable stop *c*, feed-bar *f*, hinged feeder *h*, spring *h*², guard *s*, and plate *a*, all constructed

substantially as set forth, for the purpose specified.

THOS. S. HUNTINGTON.

Witnesses:

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