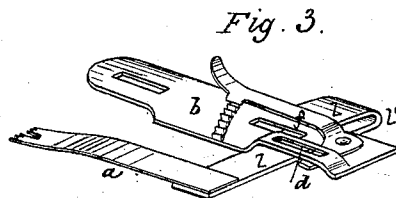
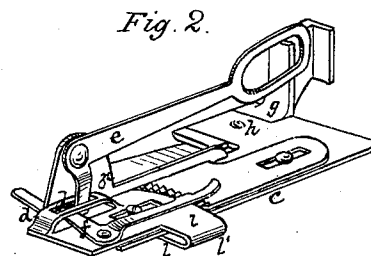
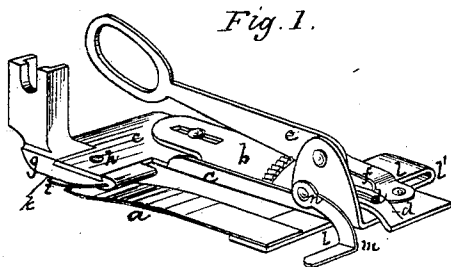


A. JOHNSTON.

Gathering or Ruffing-Attachments for Sewing-Machines.

No. 135,123.

Patented Jan. 21, 1873.



Witnesses
J. D. Patten.
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UNITED STATES PATENT OFFICE.

ALLEN JOHNSTON, OF OTTUMWA, IOWA.

IMPROVEMENT IN GATHERING OR RUFFLING ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 135,123, dated January 21, 1873.

To all whom it may concern:

Be it known that I, ALLEN JOHNSTON, of Ottumwa, Wapello county, and State of Iowa, have invented certain new and useful Improvements in Gathering and Ruffling Attachments for Sewing-Machines, of which the following is a specification:

This invention relates to gathering and ruffling attachments in which cloth is gathered by the action of a reciprocating blade or gathering-knife actuated from or by the needle arm or bar of the sewing-machine, or some other part moving in unison therewith. The special object I have now in view is to adapt the attachment to gather the goods either at or near the edge of the goods, or at a point distant from the edge, and to admit of its being readily gaged or adjusted for either kind of work. This improvement is especially adapted to foot attachments—that is to say, attachments adapted to be applied and secured to the pressure foot or bar of the sewing-machine, instead of being fastened to the cloth-plate; and it is to such an attachment that I have here represented my invention as applied. In an attachment of this kind the goods to be gathered can pass under the body of the attachment, so as to allow the gathering-blade to operate on the same at any distance from the edge. I now, for the purposes above mentioned, combine with the frame of the attachment a movable device, which I call an edge-gage, and which can be adjusted to cause the goods to be delivered to the gathering-knife, so that the latter may gather at the edge of the same, or can be turned up or raised out of the way, or out of the path of the goods, so as to permit the same to pass under the body of the attachment, and allow the gathering-knife to gather the goods at a distance from the edge of the same.

To enable others to better understand the manner in which my invention is or may be carried into effect, I have represented it as applied to a foot attachment which contains many of the characteristic features of the attachments described and claimed in reissued Letters Patent 5,070, 5,071, 5,072, granted to the Johnston Ruffler Company on the 24th September, 1872.

Figure 1 is a perspective view of the attachment from the front. Fig. 2 is a like view of

the same from the rear. Fig. 3 is a view of the reciprocating gathering-plate detached from its supporting frame.

The reciprocating gathering-blade *a* is carried by a plate, *b*, which is supported and slides on a suitable frame, *c*. In the gathering-plate is formed a slot, *d*, in which the shorter arm of the angle-lever *e* works, the longer arm of said lever being formed to connect with and receive a positive motion in both directions from the needle bar or arm. An adjusting-lever, *f*, is employed to regulate the amount of lost motion of the shorter arm of the lever *e* in the slot *d*, and thus to determine the lengthwise reciprocation of the gathering-blade.

This arrangement is similar to that shown in the reissued Letters Patent above referred to, and requires no further description here.

The frame *c* is fixed to a foot, *g*, which is designed to be attached to the presser-bar of the sewing-machine to which the attachment may be applied, taking the place of the ordinary presser-foot, and serving as the means whereby the attachment is held in place. The foot is here shown as adapted to be applied to the presser-bar of a Singer sewing-machine, being recessed to embrace the bar, and being held in place thereon by a suitable clamping or set screw. A needle-hole, *h*, is made through the foot for the passage of the needle, and to the end of the foot is secured the blade *i* for holding the gathers, in the manner described in the reissued patents above referred to. This blade extends down under the foot a suitable distance, and is slotted at its front end for the passage of the needle. The bottom of the foot is so formed, as shown, that there will be a recess, *k*, in front of and above the end of the blade to receive the gather pushed forward by the under gathering-blade *a* and retained by the upper holding-blade *i*. The attachment of the gathering-blade *a* to the sliding plate *b* is effected through the medium of the bowed or bent piece *l*, which is secured to or forms part of the plate *b*, and extends out and back therefrom any suitable distance, which may be greater or less than that represented. It is bent down at this point, and returns under the frame *c*, projecting out beyond the front side of the frame the proper distance to permit the gathering-blade to be attached to it in proper operative position.

The material to be gathered passes above the gathering-blade and below or under the upper blade *l*. If it be desired to gather the material at a distance from the edge the goods can be drawn under the frame *c*, between it and the piece *l*, back toward the rear of the attachment, until the edge of the goods is in contact with the lower bend *l'* of the piece *l*. The further this bend *l'* is from the front of the attachment the greater will be the distance from the edge of the goods at which the gathering-blade will operate on the same. It is, however, frequently necessary and desirable to gather the goods at the edge; and to this end, for the purpose of affording a sure guide to direct the goods so that the edge of the same shall be carried to the gathering-blade, I provide, on the front edge of the frame *c*, a hinged or pivoted piece, *m*, which I will call the edge-gage, consisting of a piece of metal, bent as shown, one of the arms of the piece being vertical, or nearly so, and pivoted at *n* to the frame *c*. The other arm is horizontal, or nearly so, and projects out from the front of the frame, as shown. When the cloth is to be gathered at the edge the gage is turned down to the position shown in Fig. 1, and the cloth is then passed over the horizontal arm of the gage, the vertical arm preventing the material from passing under the attachment between the frame *c* and piece *l*, so that the edge of the material will travel along the front of the frame, and the gathering-blade will thus be caused to operate on the cloth at the desired point. If, on the contrary, the cloth is to be gathered at a distance from the edge, the gage can be turned up out of the way, and the goods can then pass back under the attachment.

In case it is desired to gather a piece of

goods and at the same time to sew it to another piece which is not to be gathered, the latter is passed below the piece *l* and the gathering-blade, and the former is passed between the gathering and holding blades, as above described.

The feed carries forward the two pieces simultaneously, and the upper one will be gathered and sewed to the lower one, which will remain ungathered.

The form herein shown of the hinged edge-gage is that which I prefer; but the same may be varied without departure from the principle of my invention.

What I claim, and desire to secure by Letters Patent, is the following:

1. In gathering and ruffling attachments for sewing-machine, in which the goods to be gathered can pass under the attachment and be drawn back toward the rear of the same so as to be operated on by the gathering knife or blade at a distance from the edge, as specified, I claim an edge-gage hinged to the frame of the attachment in the position substantially as shown and described, and operating as set forth.

2. The combination, with the frame and the foot and holding-blade attached to the same, of the hinged edge-gage and the reciprocating gathering-blade, connected with its supporting-plate by a bowed or bent arm, constructed substantially as described, said parts being arranged for operation as set forth.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

Witnesses: ALLEN JOHNSTON.
B. R. HAMILTON,
A. G. HARROW.