

M. T. MOODY.

Ruffler for Sewing-Machines.

No. 130,522.

Patented Aug. 13, 1872.

Fig. 1.

Fig. 2.

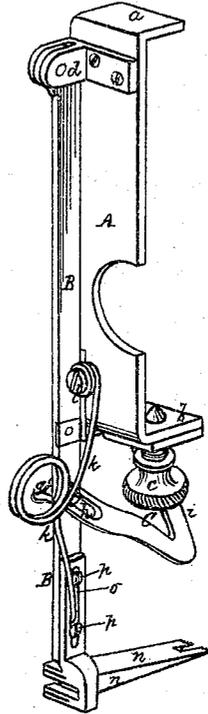
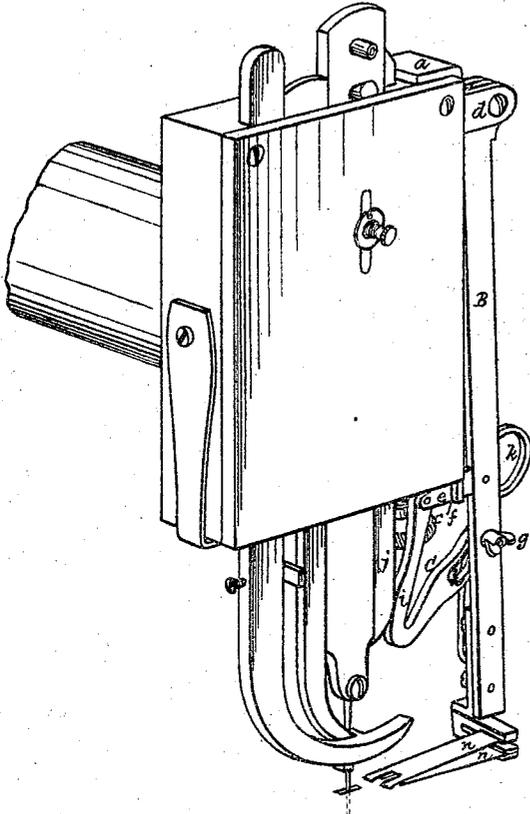
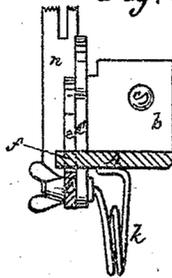


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN RUFFLERS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 130,522, dated August 13, 1872.

To whom it may concern:

Be it known that I, MARCUS T. MOODY, of Watertown, Jefferson county, New York, 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 that class of gathering and ruffling attachments in which the gathering-blade or blades are actuated from the needle-arm or bar, or some part moving in unison therewith, to move intermittently and at proper intervals toward and away from the needle in order to make the gather and present the same to the action of the needle. The invention mainly consists, first, in the combination of a clamp adapted to be secured to the head of the machine, and a vertical bar hinged to the clamp, so that it may be capable of a vibratory movement toward and away from the needle for the purpose of giving the proper motions to the gathering fingers or blades; secondly, it consists in so arranging the gathering-blade or blades of a gathering or ruffling attachment that it or they may be capable of an adjustment toward and away from the cloth-plate of the machine independently of the other parts of the attachment for the purpose of regulating the pressure according to the style or thickness of goods to be ruffled; thin goods—lace, for instance—requiring less pressure than thick goods. Other features of the invention will be hereinafter specified.

In the drawing, Figure 1 is a perspective view of my improved attachment applied to the head of a Davis sewing-machine. Fig. 2 is a like view of the attachment on the side opposite to that shown in Fig. 1. Fig. 3 is a horizontal section of the attachment in a plane just above the bottom jaw of the clamp.

The clamp for holding the attachment is shown at A. It is provided with top and bottom jaws *a b*, in the latter of which is the set or tightening screw *c* for fastening the clamp tightly in position on the head. To this clamp is hinged at *d* the upright vibratory bar B, which carries at its lower end the gathering devices, and which I shall call the gathering bar. The bar is hinged at its upper end, and the hinge-joint is near the top of the clamp; and by this arrangement a bar of such length is obtained that while it vibrates upon a pivot,

yet the radius of the arc of the circle in which the gathering-blade or blades move is so great as to cause the said blade or blades to move in a path very nearly parallel with the cloth-plate, thus admitting of the gathering or ruffling taking place without appreciably disturbing or lifting from the plate, during the back movement of the gatherer, the goods held by or between the gathering-blades. The gatherer-bar, when in its forward position, rests against the clamp throughout the length of the latter, and is thus held steady at the completion of its forward movement. For the purpose of steadying and preventing the lateral movement of the bar B during its vibrations I provide a projecting guide-piece, *e*, on the bar, which slides in a slot formed for it, at *f*, in the lower part of the clamp below the bottom jaw *b*. This is the simplest way of providing against the contingency above specified; but other means for the same purpose will readily suggest themselves. I prefer to use the guide-piece *e* for the reason also that it can be used to support one of the ends of the cam by which the back movement of the gatherer is effected. This cam is shown at C. Its upper and front end is pivoted to the guide-piece *e*, and its other end is held to the gatherer-bar by a set or clamp screw, *g*, which passes through the gathering-bar into a slot, *h*, formed in the cam, whereby the face *i* of the cam may be advanced and retracted more or less toward and away from the moving part of the sewing-machine, by which it is struck for the purpose of regulating the length of gather. In the present instance the cam is so arranged as to be struck by the sliding cam-bar *j* of a Davis "vertical feed" sewing-machine; but it will be understood that the arrangement of this cam as well as of the other parts of the gatherer may be varied to adapt the attachment to other machines. The forward movement of the gatherer is effected by means of a spring, *k*, the lower end of which is inserted in a hole or socket in the gathering-bar, while its upper end is bent around and held under the head of a clamping-screw, *l*. Between its two ends the spring is coiled, as shown, and its arrangement is such that the lower end, which, as stated, is inserted in a socket in the bar B, will turn in said socket during the vibration of the bar, thus preventing undue strain upon

the spring, and obviating any danger of twisting and breaking it. This mode of applying the spring also admits of its being readily detached from the gatherer whenever desired. For the purpose of being able to adjust the pressure of the gathering-blade or blades upon the goods, and of making them capable of this adjustment independently of the other parts of the attachment, I apply the gathering-foot proper—consisting, in this instance, of the two spring-blades, *n n*, such as are now generally in use—to its support in such manner that it is adjustable thereon toward and away from the cloth-plate of the machine with which the attachment may be used. In the present instance this is effected by slotting the shank of the gathering-foot at *o*, and then fastening it to the gathering-bar by set-screws *p* passing through the slot into the bar. By loosening the screws the gathering-foot may be set up or down, as desired, the retightening of the screws serving to secure it in its new position.

Having now described my invention and the manner in which the same is or may be carried into effect, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a clamp adapted to be secured upon the head of a sewing-machine, and an upright vibratory gathering-bar hinged to the same under the arrangement, and for operation as shown and set forth.

2. In combination with the hinged gathering-bar and the clamp, arranged to operate as set forth, the means herein described or their substantial equivalent for steadying and preventing any lateral movement of the said bar during its vibrations.

3. The combination, with the hinged gathering-bar and the clamp, of the adjustable cam and spring for imparting the requisite movement to the bar, said parts being constructed and arranged for joint operation, substantially as shown and set forth.

4. A gathering or ruffling attachment for sewing-machines in which the gathering-foot is adjustable up and down independently of the other parts of the attachment, substantially as and for the purposes set forth.

5. The combination of the vibratory gathering-bar and the gathering-foot carried by and adjustable upon said bar, as herein shown and set forth.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

MARCUS T. MOODY.

Witnesses:

S. ZIMMERMAN,
C. D. RICHEY.