

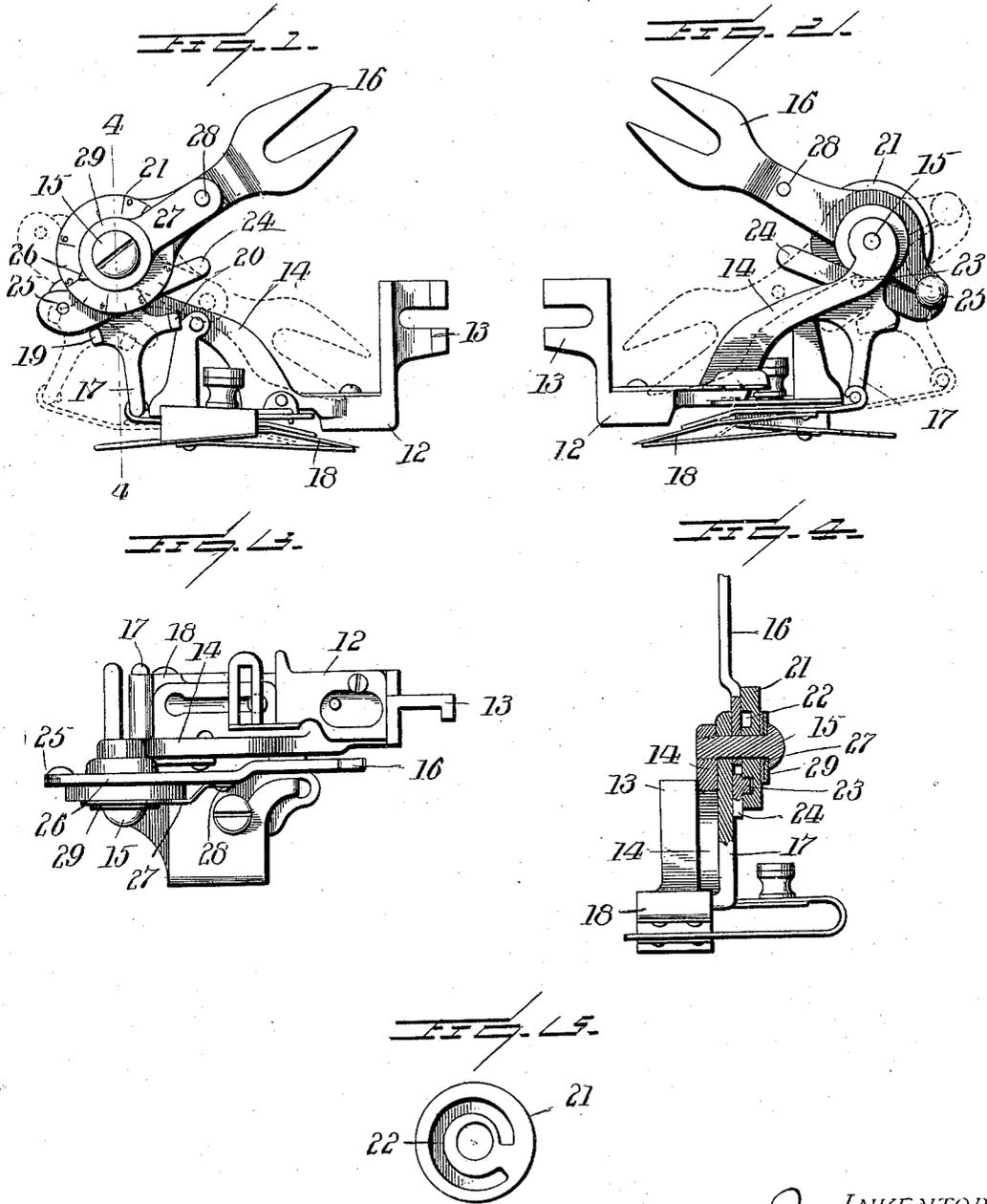
No. 686,302.

Patented Nov. 12, 1901.

A. JOHNSTON.
SEWING MACHINE RUFFLER.

(Application filed Mar. 22, 1901.)

(No Model.)



WITNESSES:
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UNITED STATES PATENT OFFICE.

ALLEN JOHNSTON, OF OTTUMWA, IOWA, ASSIGNOR TO THE GREIST MANUFACTURING COMPANY, A CORPORATION OF CONNECTICUT.

SEWING-MACHINE RUFFLER.

SPECIFICATION forming part of Letters Patent No. 686,302, dated November 12, 1901.

Application filed March 22, 1901. Serial No. 52,382. (No model.)

To all whom it may concern:

Be it known that I, ALLEN JOHNSTON, a citizen of the United States, residing at Ottumwa, in the county of Wapello and State of Iowa, have invented certain new and useful Improvements in Sewing-Machine Rufflers, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to that class of ruffling attachments for sewing-machines in which the ruffling-blades are operated from the needle-bars of the machines; and the present invention has for its object to provide a convenient regulating device for varying the throw of the ruffling-blades, so that ruffles or gathers of different sizes or fullness may be produced, as desired.

15 In the accompanying drawings, Figures 1 and 2 are opposite side views of my improved ruffler. Fig. 3 is a plan view thereof. Fig. 4 is a detail section on line 4 4, Fig. 1. Fig. 5 is a detail inside view of the regulating-disk.

25 Referring to the drawings, the frame of the attachment comprises a presser-foot portion 12, having a shank 13 for attachment to the presser-bar of the sewing-machine and a rigid inclined standard 14, attached to or formed integral with the presser-foot 12. Supported at the upper part of the standard 14 is a screw-stud 15, on which the operating-lever 16 is pivoted, said lever being forked in the usual manner for engagement with a pin or roller-stud on the needle-bar of the machine. Also pivotally mounted on the screw-stud 15, but independently of the operating-lever 16, is a swinging arm or lever 17, connected at its lower end in a well-known manner with the ruffling-blade 18, the said swinging arm or lever being provided with two separated contact lugs or portions 19 and 20. The screw-stud 15 also supports a rotative regulating-disk 21, the inner face of which is provided with an eccentric groove 22, entered by a pin or stud 23 on an adjustable regulating-arm 24, pivotally attached at 25 to the operating-lever 16, the said adjustable arm 24 being arranged to impinge against the lugs or contact portions 19 and 20 of the swinging arm or lever 17. The adjustable regulating-arm 24 is

through its described connection with the regulating-disk 21 held rigid, so that it will move with the operating-lever 16; but by turning the said regulating-disk the position of the said adjustable regulating-arm will be varied by the eccentric engaged by the pin or stud 23, so that there will be more or less lost motion between the said arm and the contact portions or lugs 19 and 20 on the swinging arm or lever 17, to which the ruffling blade is attached. The lug or projection 20 on the swinging arm or lever 17 and against which the arm 24 impinges to move the ruffling-blade backward for the ruffling-stroke is farthest from the pivotal point of the said arm, so that a change of the working position of said arm with reference to said projection will cause a greater variation in the operating position of the ruffling-blade in its extreme backward movements than the variation of the position of the extreme forward stroke of said blade. In other words, the adjustment of the working position of the arm 24 by the regulating device 21 will vary the throw of the ruffling-blade at both ends of its stroke; but the greatest variation will be at the end of the backward stroke of said blade. This method of regulating the throw of the ruffling-blade is important, for the reason that in making very fine gathers or ruffles the folds should be deposited only a slight distance beyond the needle of the machine, while in making larger plaits or gathers the folds should be carried a greater distance beyond the needle. The said regulating-disk 21 is preferably provided with a roughened or milled periphery for convenience in turning same by the finger of the attendant, and said disk is also preferably provided on its outer face with a graduated scale, adjacent to which is an index-finger 26, formed on a plate 27, having an opening through which the screw-stud 15 passes, said plate 27 being attached at one end by a rivet 28 to the operating-lever 16. A friction-washer 29, placed beneath the head of the screw-stud 15 and yieldingly pressing the plate 27 against the regulating-disk 21, serves to prevent accidental displacement of said disk from any position to which it may be adjusted.

The eccentric groove 22 in the regulating-

5 disk 21 is not a continuous or endless one, and the walls at the ends of said groove serve as stops, abutting against the pin or stud 23, to limit the turning regulating movements of said disk in both directions.

10 It will be understood that the construction just described provides a simple and convenient regulating device whereby the throw of the ruffling-blade in both directions may be properly varied, so as to vary its working position at both ends of its stroke at the will of the attendant, the construction involving this improved regulating device being simple and easy to make, strong and positive in operation, and convenient in use.

15 Having thus described my invention, I claim and desire to secure by Letters Patent—

20 1. In a sewing-machine ruffling attachment, the combination with a ruffling-blade and an operating-lever, of a swinging arm or lever connected with said ruffling-blade, an adjustable regulating-arm pivoted to said operating-lever and provided with a pin or stud, contact portions on said swinging arm or lever to be engaged by said regulating-arm, a regulating-disk provided with an eccentric groove engaged by said pin or stud on said regulating-arm, so that by turning said disk the position of the said regulating-arm will be varied so that there will be more or less lost motion between the said regulating-arm and the said contact portions of the said swinging arm or lever.

35 2. In a sewing-machine ruffling attachment,

the combination with the operating-lever 16, of the adjustable regulating-arm 24 pivotally attached at one end to said operating-lever and provided with a pin or stud 23, the ruffling-blade, the swing arm or lever 17 connected at its lower end to said ruffling-blade, and provided with the separated lugs or contact portions 19 and 20 to be engaged by said adjustable regulating-arm, and the rotatable regulating-disk 21 having an eccentric groove entered by said pin or stud on said regulating-arm.

3. In a sewing-machine ruffling attachment, the combination with the operating-lever 16, of the adjustable regulating-arm 24 pivotally attached at one end to said operating-lever and provided with a pin or stud 23, the ruffling-blade, the swinging arm or lever 17 connected at its lower end to said ruffling-blade, and provided with the separated lugs or contact portions 19 and 20 to be engaged by said adjustable regulating-arm, and the rotatable regulating-disk 21 having an eccentric groove entered by said pin or stud on said regulating-arm, said regulating-disk being provided on one face with a graduated scale, and an index-finger or pointer adjacent to said scale and movable with said operating-lever.

In testimony whereof I affix my signature in presence of two witnesses.

ALLEN JOHNSTON.

Witnesses:

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J. T. HACKWORTH.