

J. SCHREINER & F. KURZ.
SEAM DAMPENER.
APPLICATION FILED FEB. 20, 1912.

1,059,640.

Patented Apr. 22, 1913.

2 SHEETS-SHEET 1.

Fig. 1.

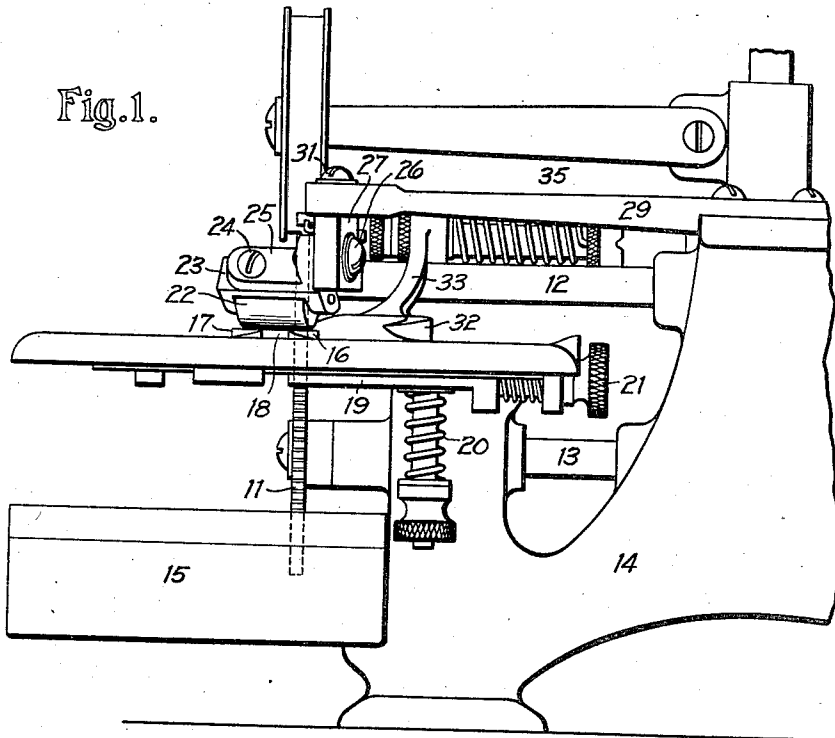
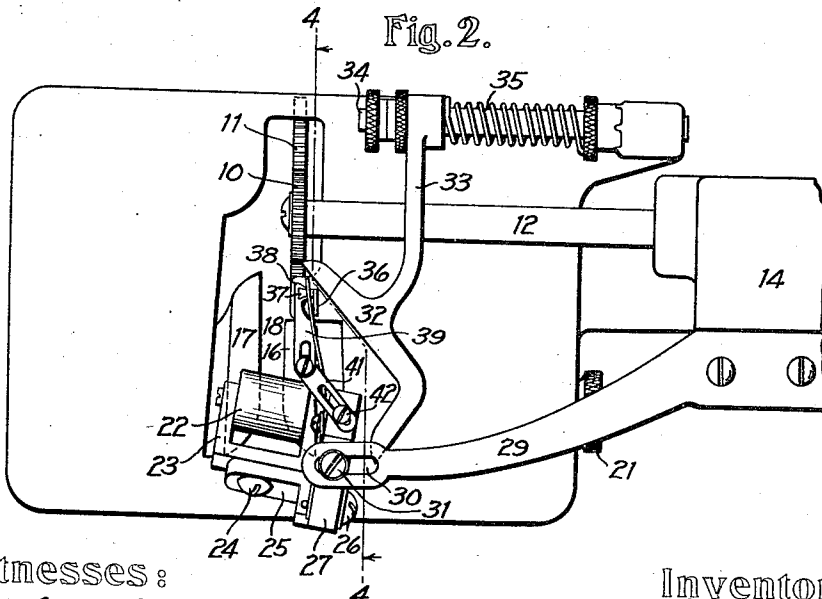


Fig. 2.



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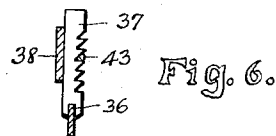
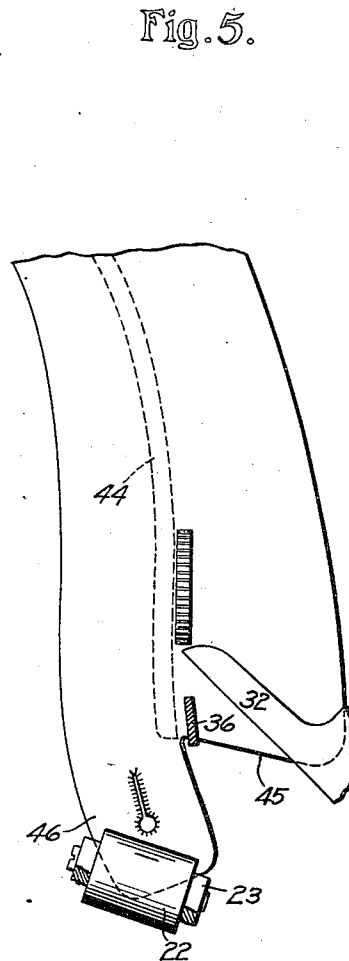
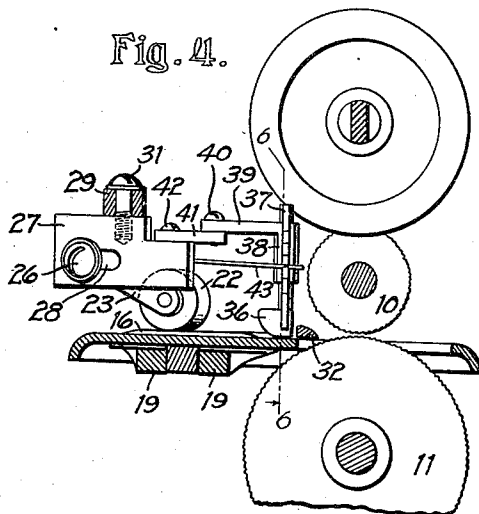
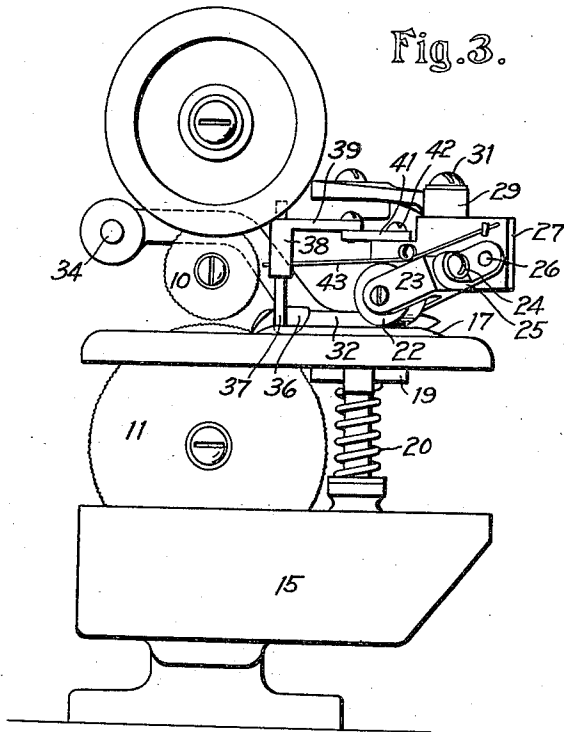
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John Schreiner
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by their attorneys
Osgood, Davis & Dotsey

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

JOHN SCHREINER AND FRED KURZ, OF ROCHESTER, NEW YORK, ASSIGNORS TO
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SEAM-DAMPENER.

1,059,640.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, JOHN SCHREINER and FRED KURZ, citizens of the United States, and residents of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Seam-Dampeners, of which the following is a specification.

This invention relates to machines such as are employed in laundries for the purpose of dampening the seams of turn-over collars, after the collars have been ironed flat, to permit the collars to be turned over or folded along the seams.

The object of the invention is to provide machines of the kind in question with improved means for guiding the collars while they are under the influence of the feeding-means, and particularly to render such guiding-means adjustable to adapt them for use with collars of various sizes and styles. To this end we employ, as one feature of the invention, a presser-roller which engages the collar in advance of the feeding and dampening means, this roller being adjustable in various directions and particularly in a manner to vary the angle of its axis of rotation to the line of feed so as to accommodate the machine to collars of different curvature. We also employ a device in the nature of a kick-off, which frictionally engages the collar, and which is also adjustable in various ways to modify its action upon the collar, and in connection with the presser-roller and the kick-off we employ a unitary device for supporting both of these members, together with connections permitting them to be adjusted independently of each other.

The invention will be more particularly described in connection with the embodiment thereof illustrated in the accompanying drawings, in which—

Figures 1, 2 and 3 are, respectively, a front-elevation, a plan-view and an end-elevation of a portion of a seam-dampener embodying the present invention; Fig. 4 is a vertical sectional view on the line 4—4 in Fig. 2; Fig. 5 is a diagrammatic plan-view, on a larger scale than the other figures, illustrating the manner in which the guiding-devices cooperate with a collar; Fig. 6 is a detail view of the kick-off shown

in vertical section on the line 6—6 in Fig. 4, looking from left to right in the latter figure.

As the invention resides particularly in novel guiding or work-controlling devices which are applicable to seam-dampeners of various forms, the particular construction and arrangement of the feeding and dampening means in conjunction with which they are employed are illustrated only in so far as is necessary for an understanding of the invention, the invention being shown as embodied in a machine of the type disclosed in United States Letters Patent to Mattice, No. 851,541, dated April 23, 1907. The drawings illustrate the upper and lower feeding- and dampening-rollers 10 and 11, respectively, mounted upon, and actuated by, shafts 12 and 13 which are journaled in a frame 14, the lower roller 11 dipping into water in a tank 15, all as in said patent. The machine is also shown as provided with the usual seam-guide, comprising members 16 and 17 operating through an opening in the table of the machine, the seam being guided in a channel 18 between these members. The seam-guide is carried by arms 19 which are pressed upwardly by a spring 20, and it is adjustable transversely by means of a thumb-screw 21.

In the machine of the Mattice patent the seam-guide constitutes a lower, yielding work-support, while the collar is held down, against the pressure of the seam-guide, by means of a presser in the form of an arm having a smooth stationary face which engages the upper surface of the collar directly above the seam-guide. In accordance with the present invention, however, we employ, in place of this stationary presser, a roller 22 which is journaled in a fork 23. By means of a screw 24 this fork is clamped against one arm of a bracket 25, and the other arm of the bracket is clamped, by means of a screw 26, to a block 27. The screw 26 passes through a slot 28 in the block to permit an adjustment which will be referred to hereinafter. The block 27 is in turn supported by a stationary arm 29 projecting forwardly from the frame 14 of the machine. This arm is provided with a slot 30 through which passes a screw 31 threaded into the block, and this form of connection

permits both angular and transverse adjustments of the block for a purpose which will be presently described.

The construction and arrangement of the means just described for supporting the roller 22 permit universal adjustment of the roller. Upon loosening the screw 26 the bracket 25, together with the fork 23 and the roller, may be moved forwardly or rearwardly, thus varying the distance of the presser-roller from the feed-rollers in the direction of feed. By the same connection the height of the roller may be adjusted, thus regulating the cooperative relation between the seam-guide and the roller. By loosening the screw 24 the fork 23 may be rocked about the screw, thus providing an adjustment by which the roller may be caused to have an even bearing upon the work, or by which compensation may be made for differences in the thickness of the two parts or folds of the collar which engage the respective members 16 and 17 of the seam-guide.

Upon loosening the screw 31 the block 27 may be moved transversely, owing to the employment of the slot 30, thus adjusting the presser-roller transversely with respect to the line of feed, and, by swinging the block 27 around the screw 31, the angle of the axis of rotation of the presser-roller to the line of feed may be adjusted.

The adjustment last referred to is of importance as it enables the presser-roller to assist the seam-guide in properly directing the work through the machine, particularly by reason of the fact that there is more or less longitudinal curvature in a collar when it is ironed flat. As shown particularly in Fig. 5, it will be apparent that, by adjusting the presser-roller to the angular position shown, this roller, in addition to holding the collar down against the seam-guide, may be caused to have a tendency to swing the collar in the direction of its curvature, thus causing it to move through the curved path necessary to enable the feeding- and dampening-rollers to follow the line of the seam. In different styles of collars this longitudinal curvature varies greatly, but by changing the inclination of the presser-roller the machine may be adapted to operate upon all the various styles and sizes of collars commonly employed, feeding them with certainty and precision.

The arrangements for adjusting the presser-roller horizontally, both transversely and in the direction of feed, have utility particularly in connection with the means employed to prevent the machine from dampening the tab at the end of the collar. The machine is illustrated as provided with a device 32 which is familiar on such machines, though not shown in said patent, and is commonly designated as a "kick-off."

This device rests frictionally upon the upper surface of the collar and is mounted upon an arm 33 journaled upon a fixed shaft 34. The arm 33 and the kick-off are pressed downwardly by means of an adjustable spring 35 by which the pressure of the kick-off upon the collar may be regulated.

It will be apparent that as the kick-off 32 is located entirely upon the right-hand or inner side of the feeding and dampening-rollers it subjects the collar to a friction or drag which tends to swing the collar to the right as it passes through the machine. This tendency is to some degree counterbalanced, however, so as to prevent actual deflection of the work, by the presser and the seam-guide, which subject the collar to a frictional drag on the opposite side of the feeding- and dampening-rollers. When the end of the collar is reached, as shown in Fig. 5, the outer fold 45 of the collar moves out of engagement with the kick-off 32, and, in order that the drag may be removed from the other part of the collar at approximately the same time, the presser-roller should be arranged at such a distance from the feed-rollers that its engagement with the tab 46 of the collar may terminate as the fold 45 leaves the kick-off 32. This arrangement is facilitated, in the present invention, by the provision for adjusting the presser-roller toward and from the feed-rollers, this adjustment permitting the machine to be adapted for use with collars of different styles having tabs of different lengths. In the same connection the provision for transverse adjustment of the presser-roller is important, since this permits the presser-roller to be adjusted in such position as properly to engage the tab whatever the form of the latter may be, some tabs being arranged at a greater angle than others with the line of the seam 44.

It is highly desirable to prevent engagement of the feeding- and dampening-rollers with the tab of the collar, in order that the latter may not be marked or defaced by the dampening action, and the kick-off 32 commonly employed in machines of this type is intended to accomplish this result. We have found, however, that it will not do so with certainty, and we, therefore, employ an additional kick-off or frictional device which is provided with a lower extremity 36 adapted to engage the upper surface of the collar somewhat in advance of the feeding- and dampening-rollers. This kick-off 36 is provided with a vertical shank 37 of dove-tail form in cross-section, which moves in a guide 38 integral with an arm 39. By means of a screw 40 passing through a slot in the arm 39 the latter is adjustably fixed to a second arm 41. The arm 41 is slotted at its forward end, and is fixed adjustably, by means of a screw 42, to the block 27. A

spring 43, fixed at one end to the block 27, engages, at its other end, any one of a series of notches on the inner side of the stem 37, as shown particularly in Fig. 6, and this spring serves to press the kick-off 36 against the surface of the collar.

The construction just described provides for supporting the kick-off 36 upon the block 27 in common with the presser-roller, so that the kick-off and the presser-roller may be applied to the machine as a unitary attachment, but the connections, including the arms 39 and 41, provide for universal horizontal adjustment of the kick-off 36 independently of the presser-roller. Accordingly, the kick-off may be adjusted toward or from, or transversely with respect to, the feeding- and dampening-rollers, and it may also be adjusted angularly about its vertical axis.

In Fig. 5 the kick-off 36 is shown in such a position that it engages the outer fold of the collar, thus subjecting it to a certain amount of frictional drag which tends to assist the other parts of the machine in directing the collar properly. The effect of this drag may be adjusted in two ways. In the first place, the pressure of the kick-off against the work may be adjusted by engaging the spring 43 with one or another of the notches in the shank 37. In the second place, the point of application of the friction may be adjusted transversely with respect to the feeding- and dampening-rollers. With respect to this latter adjustment, however, the kick-off is preferably so located as to just clear the inner edge of the tab when the collar reaches the position of Fig. 5. Accordingly, when the outer fold 45 of the collar moves beyond the kick-off 36 the latter is depressed, by the spring 43, into engagement with the table of the machine. The kick-off 36 then acts as a positive stop or guide which may be engaged by the edge of the tab, and which will positively prevent the tab from passing between the dampening-rollers. In connection with this last function the angular position of the kick-off 36 may be adjusted to correspond to the angle at which the tab projects from the body of the collar, thus causing the edge of the tab to be engaged evenly by the flat lateral surface of the kick-off.

By the conjoint use of the presser-roller and the kick-off above described the seam-dampener may be adapted to operate with certainty upon collars of a great variety of shapes and sizes. It will be understood, however, that while the invention, in its most complete embodiment, contemplates the conjoint use of these two devices, it is not limited to such use, and that the invention, in general, is not limited to the embodiment thereof hereinbefore described and illustrated in the accompanying drawings, but

may be embodied in various other forms within the nature of the invention as it is defined in the succeeding claims.

We claim:—

1. In a seam-dampener, the combination, with means for supporting and feeding a collar in unfolded form, and a freely rotatable work-guiding roller adapted to engage the surface of the collar in advance of the feeding-means, of means for rotatably supporting the roller in said position, said means being angularly adjustable, about an axis normal to the plane of feed, so as to vary the angular position of the axis of the roller in a plane parallel with the plane of feed.

2. In a seam-dampener, the combination, with means for engaging and feeding an unfolded collar adjacent the seam-line, of a presser-roller, and supporting-means for rotatably supporting the presser-roller in position to engage the tab-portion of the collar in advance of the feeding-means, and at a normally fixed distance therefrom, said supporting-means being adjustable in the direction of feed to vary said distance in accordance with the length of the tab.

3. In a seam-dampener, the combination, with feeding-means, of a presser-roller engaging the work in advance of the feeding-means, and means for rotatably supporting the presser-roller, said means being adjustable to vary the position of the presser-roller both angularly and transversely with respect to the line of feed.

4. In a seam-dampener, the combination, with feeding-means and a spring-pressed vertically-movable work-support of a presser-roller engaging the work, above the work-support, in advance of the feeding-means, and means for rotatably supporting the presser-roller, in fixed vertical position, said means being adjustable to vary the height of the presser-roller.

5. In a seam-dampener, the combination, with a work-support and a feed-roller, of a presser-roller engaging the work, above the work-support, in advance of the feed-roller, and means for rotatably supporting the presser-roller, said means being adjustable to vary, independently, the height of the presser-roller and the distance of the presser-roller from the feed-roller in the direction of feed.

6. In a seam-dampener, the combination, with a work-support and a feed-roller, of a presser-roller engaging the work, above the work-support, in advance of the feed-roller, and means for rotatably supporting the presser-roller, said means being adjustable to vary the height of the presser-roller above the work-support and the angle of its axis to the line of feed.

7. In a seam-dampener, the combination, with dampening- and feeding-means, of a

kick-off adapted to yieldingly engage the upper surface of the body of a collar and having a lateral wide surface adapted to engage the edge of a tab of the collar after the
5 body of the collar has passed beyond the kick-off, and means for yieldingly supporting the kick-off, said means being adjustable to vary the angular position of the kick-off about a vertical axis substantially coincident
10 with the kick-off so as to adjust the inclination of said surface to the direction of feed in accordance with the inclination of the tab to the body of the collar without substantially changing the distance of the kick-off
15 from the feeding-means.

8. In a seam-dampener, the combination, with a dampening- and feeding-means, of a presser-roller, a kick-off, a common support for the presser-roller and the kick-off, and
20 independently-adjustable connections between said support and the presser-roller and kick-off whereby they may be adjusted horizontally independently of each other.

9. In a seam-dampener, the combination,
25 with feeding- and dampening-devices, of a

spring-pressed kick-off engaging the work in advance of said devices, and means for supporting the kick-off, said means being adapted for adjustment, in a plane parallel with the plane of feed, to vary, independently, 30 the transverse and longitudinal position of the kick-off with respect to the line of feed, and the angular position of the kick-off about an axis normal to said planes.

10. In a seam-dampener, the combination, 35 with feeding- and dampening-devices, of a spring-pressed kick-off engaging the work in advance of said devices, and means for adjustably supporting the kick-off, said means comprising an arm, on which the kick-off is 40 carried, lying in a plane parallel with the plane of feed, a second arm pivotally and slidably connected with the first-mentioned arm, and a fixed support to which the second arm is pivotally and slidably connected.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."