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DEVICE FOR THE AUTOMATIC APPLICATION OF ANTISEPTIC INSULATING
RIBBONS TO THE EDGES OF DRINKING GLASSES, CUPS, AND THE LIKE
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Fig. 1.

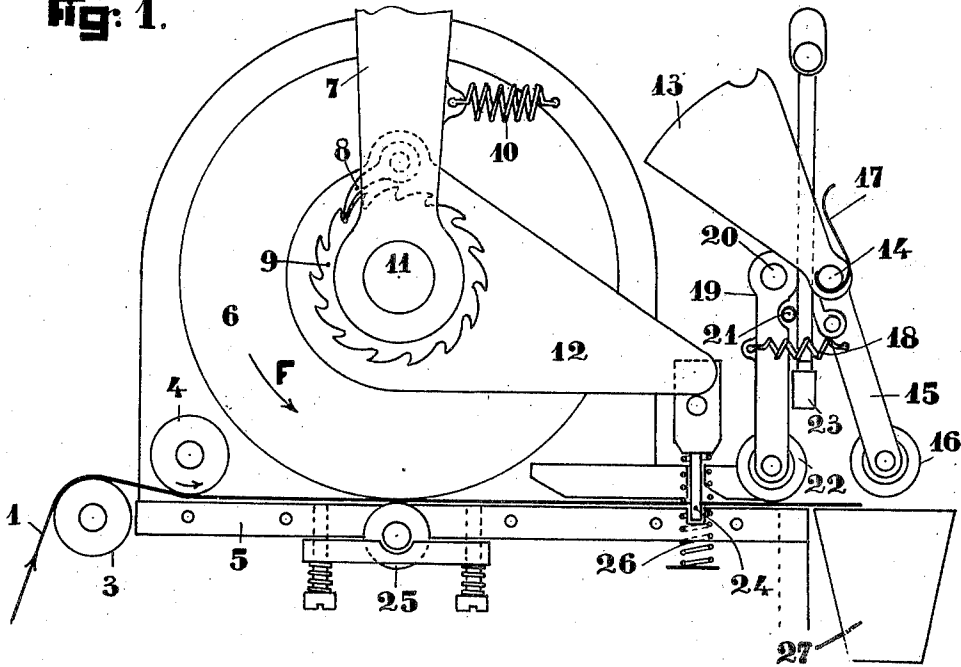
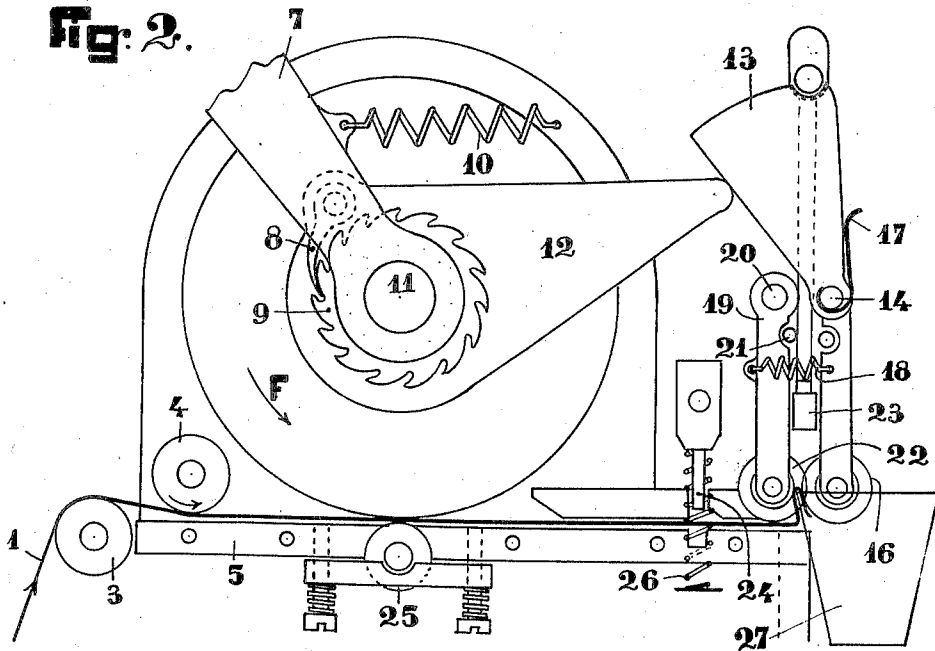


Fig. 2.



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DEVICE FOR THE AUTOMATIC APPLICATION
OF ANTISEPTIC INSULATING RIBBONS TO
THE EDGES OF DRINKING GLASSES,
CUPS, AND THE LIKE

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6 Claims. (Cl. 93—1)

The object of the present invention is a device for the automatic application of antiseptic insulating ribbons on the edge of drinking glasses, cups and the like.

According to the invention, the device is operated by means of the rotation of a controlling crank in one direction against the tension of a retaining return spring to accomplish the following successive steps; the advancement of the protecting ribbon on the edge of the container, the bending of the side edges of the ribbon over the inner and outer surfaces of the container, and the cutting of said ribbon prior to its application on to said edge. The device comprises a stock reel from which the ribbon unfolds, a number of adjusting and guide rollers, a carrying roller operated by the controlling crank, a cutter for cutting the ribbon, and a device for bending the ribbon over the edge of the container and apply it to the exterior and interior surfaces thereto.

The controlling crank for this purpose has the shape of an angle lever, one arm of which is operated by hand, while the other acts against an oscillating lever of the device for bending and applying the ribbon. During the free return stroke, produced by the tension of the return spring, one of the arms of the angle lever strikes against the movable knife blade of a cutter, which is also provided with a spring, thus cutting the ribbon. The device for bending the ribbon comprises a plurality of cooperating pairs of rollers, each of which comprises a roller having a concave periphery and a roller having a convex periphery, both concentric with the periphery of the container. Between said rollers the container is vertically introduced from below. The rollers have varying dimensions, and the curvatures of their contracting surfaces may vary according to the size of the container on which the ribbon is to be applied.

The annexed drawing shows schematically and by way of example one embodiment of the invention.

Figure 1 is a side elevation of a device according to the invention showing the various elements in the position of rest, and

Figure 2 is a similar view showing the position of the different parts when the strip is bent over the edge of the glass and pressed against the exterior and interior surfaces thereof.

A ribbon 1 unfolds from a stock reel, not shown in the drawing, and passes between two small guide rollers 3 and 4. It is then engaged by the carrying roller 6 which may be rotated by means of the crank 7 and advanced along the table 5.

In order to prevent the ribbon from being pushed backward along the table the crank 7 is provided with a pawl 8 engaging a ratchet wheel integral with the rubber carrying roller 6, against which the ribbon 1 is pressed by means of roller 25. The crank 7 is actuated against the tension of a return spring 10, which is distended when crank 7 is caused to be rotated towards the left hand side of the drawing as shown in Fig. 2. The crank 7 has the shape of an angle lever having a pivot pin 11, about which it may rotate carrying with it the arm 12, the arm 12 in the course of its rotation, strikes against a counterweight 13 of the ribbon bending lever, which is pivoted at an intermediate point 14. The other arm 15 of this lever carries the roller 16 having a convex rim, adapted to penetrate into the container, and bend one end of the ribbon over the inner side thereof. This lever is normally placed in the position shown in Fig. 1, owing to the action of the counterweight 13 and of the return spring 17 which is fulcrumed to the pivot pin 14. Another spring 18, shown distended in Fig. 1, is connected to the lower arm of the lever and holds a movable lever 19 which is pivoted to the pivot pin 20 against a stop 21. This pivot pin 20 as well as the stop 21 is mounted on the frame in any suitable manner. This lever 19 is provided in its lower portion with the roller 22 having a concave contact surface engaging the exterior surface of the container. By rotating the crank 7 towards the left hand side, the arm 12 strikes against the counterweight 13, and the roller 16 bends and applies the ribbon on the edge of the container. When the crank 7 returns to its normal position owing to the return retaining spring 10 previously distended, lever 12 strikes against the knife 24 provided with spring 25, which descending between suitable guides, cuts the ribbon 1. A small roller 25 presses from the underside the ribbon 1 against the carrying roller 6.

The operation of the device is self evident, and it must be understood that a number of modifications may be introduced to its different elements without departing from the main principle of the invention. It is also to be understood that the sequence of the glasses or containers one after the other between the ply rollers 22 and 16 must be synchronous with the approach of said rollers towards each other, with the cutting device, and with the unfolding rate of the ribbon.

I claim:

1. In a mechanism for applying a sanitary edging strip to the edge of a drinking glass, cup, container and the like, a pair of rollers to operate

across the edge of said glass to bend and apply the edging strip upon the edge of said glass, a cutter to cut said edging strip upon application to said glass, lever means to separate said rollers
 5 prior to insertion of an edge of a glass therebetween and to bring said rollers together after insertion of the edge of a glass therebetween to apply said edging strip thereto and intermittent
 10 feed means to feed said edging strip intermittently to said pair of rollers and to said cutter for application to the edge of said glass.

2. In a mechanism for applying a sanitary edging strip to the edge of a drinking glass, cup, container and the like, a pair of rollers to operate
 15 across the edge of said glass to bend and apply the edging strip upon the edge of said glass, a cutter to cut said edging strip upon application to said glass, lever means to separate said rollers prior to insertion of an edge of a glass
 20 therebetween and to bring said rollers together after insertion of the edge of a glass therebetween to apply said edging strip thereto and intermittent feed means to feed said edging strip
 25 intermittently to said pair of rollers and to said cutter for application to the edge of said glass, said intermittent feed means including a second pair of rollers by which said edge strip is gripped, a pawl and ratchet combination for
 30 turning one of said rollers to cause a feed of said edging strip toward said cutter and said first named pair of rollers and a hand lever to operate said pawl and ratchet.

3. In a mechanism for applying a sanitary edging strip to the edge of a drinking glass, cup, container and the like, a pair of rollers to operate
 35 across the edge of said glass to bend and apply the edging strip upon the edge of said glass, a cutter to cut said edging strip upon application to said glass, lever means to separate said rollers prior to insertion of an edge of a glass therebetween and to bring said rollers together after insertion
 40 of the edge of a glass therebetween to apply said edging strip thereto and intermittent feed means to feed said edging strip intermittently to said pair of rollers and to said cutter for application to the edge of said glass, said intermittent feed means including a second pair of rollers by which said edge strip is gripped, a
 45 pawl and ratchet combination for turning one of said second pair of rollers to cause a feed of said edging strip toward said cutter and said first pair of rollers, a hand lever to operate said pawl and cause said pawl to move said ratchet and an actuator moving with said pawl to operate said
 50 lever means to cause it to bring said rollers together and to operate said cutter.

4. In a mechanism for applying a sanitary edging strip to the edge of a drinking glass, cup, container and the like, a pair of rollers to oper-

ate across the edge of said glass to bend and apply the edging strip upon the edge of said glass, a cutter to cut said edging strip upon application to said glass, lever means to separate said rollers prior to insertion of an edge of a glass
 5 therebetween and to bring said rollers together after insertion of the edge of a glass therebetween to apply said edging strip thereto and intermittent feed means to feed said edging strip
 10 intermittently to said pair of rollers and to said cutter for application to the edge of said glass, said rollers being respectively shaped so as to conform to the exterior and interior surfaces of the edge of the glass to which the edging strip is to be applied.

5. In an apparatus for applying a sanitary strip to the edge of a drinking glass and the like, a pair of oscillatory levers having glass contacting members adapted to engage the exterior and interior surfaces, respectively, of the glass, a
 15 counterweight carried by one of said levers to keep them normally separated and resilient means for bringing them together, roller means for feeding a continuous strip of adhesive material between the edge of the glass and said glass
 20 contacting members, said roller means being rigidly connected to a ratchet, an actuating lever carrying a pawl mechanism for rotating said ratchet in one direction, said actuating lever having an extension to engage said counterweight
 25 during the strip-feeding movement to bring said glass contacting members together, and means actuated by said extension during its return motion for severing said strip.

6. In an apparatus for applying a sanitary strip to the edge of a drinking glass and the like, a pair of oscillatory levers having glass contacting members adapted to engage the exterior and interior surfaces, respectively, of the glass, a
 30 counterweight carried by one of said levers to keep them normally separated and resilient means for bringing them together, roller means for feeding a continuous strip of adhesive material between the edge of the glass and said glass contacting members, said roller means
 35 being rigidly connected to a ratchet, an actuating lever carrying a pawl mechanism for rotating said ratchet in one direction, said actuating lever having an extension to engage said counterweight during the strip-feeding movement to bring said glass contacting members together, and means actuated by said extension during its return motion for severing said strip, said glass contacting members consisting of a pair of rollers respectively having concave and convex contacting surfaces to conform to the portion of the
 40 edge of the glass to which said strip is applied.

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