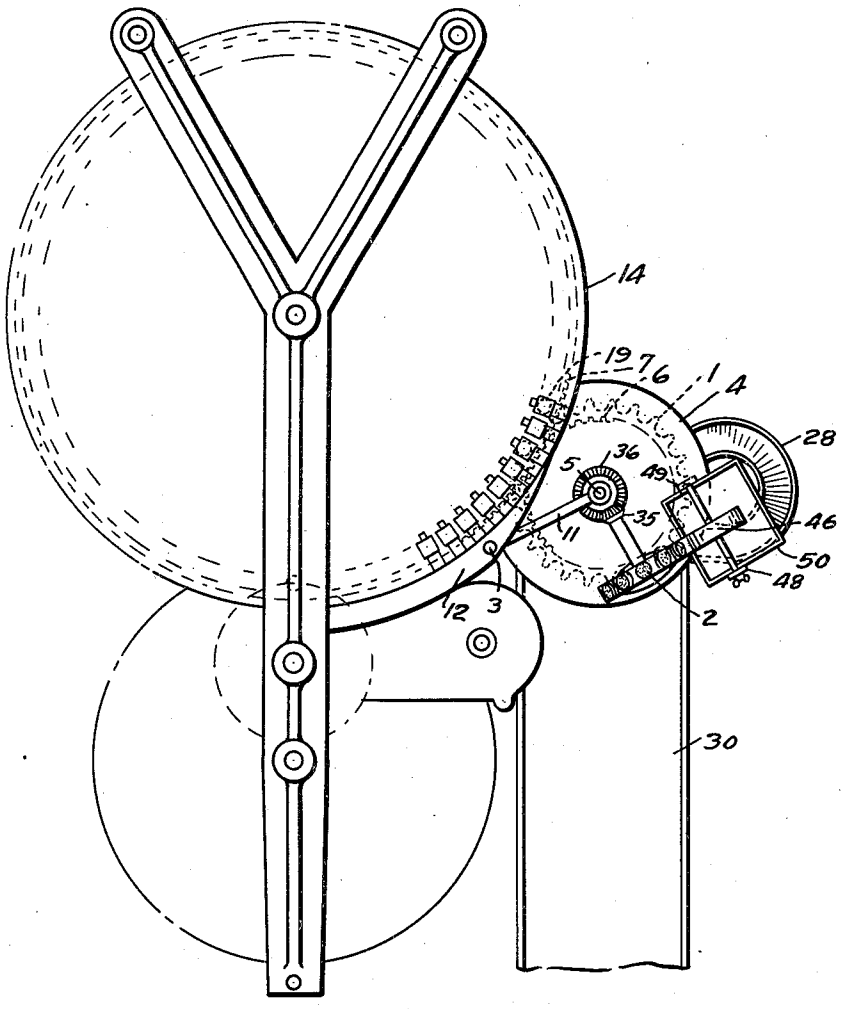
Jan. 21, 1941. B. NAGY 2,229,116

BOTTLE CROWN PARAFFIN COATING DEVICE

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Fig. 1



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BOTTLE CROWN PARAFFIN COATING DEVICE

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Fig. 2

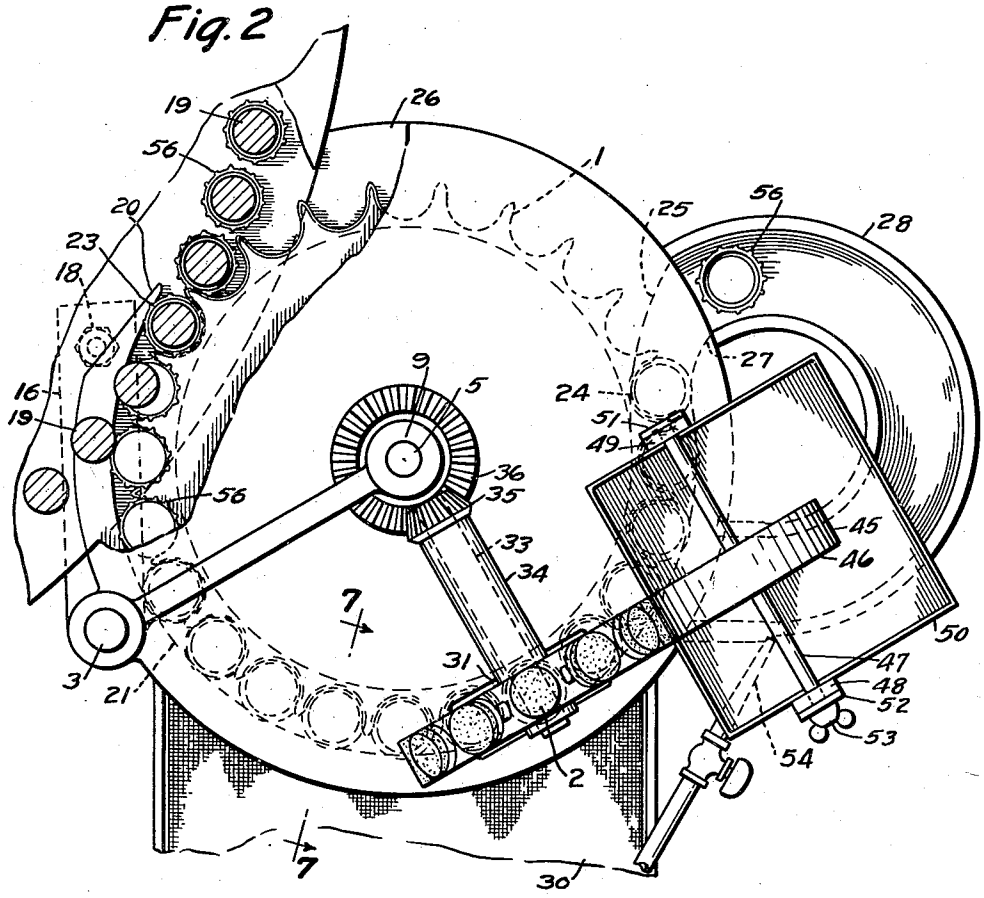


Fig. 6

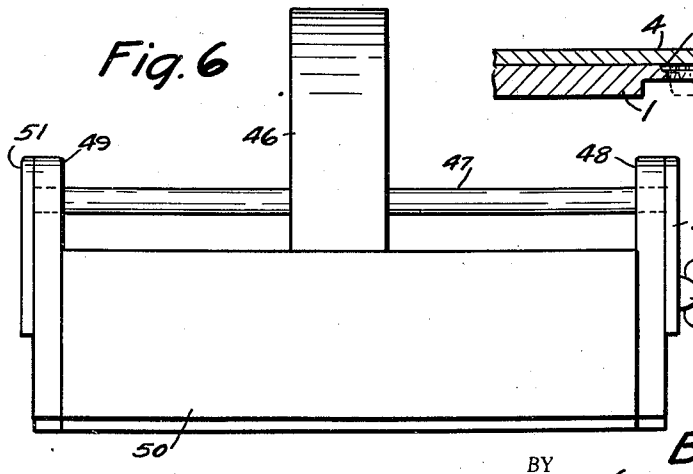


Fig. 7

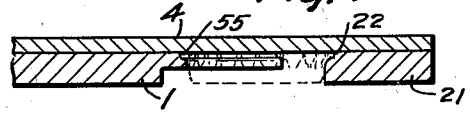
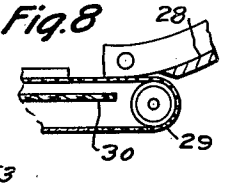


Fig. 8



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BOTTLE CROWN PARAFFIN COATING DEVICE

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Fig. 3

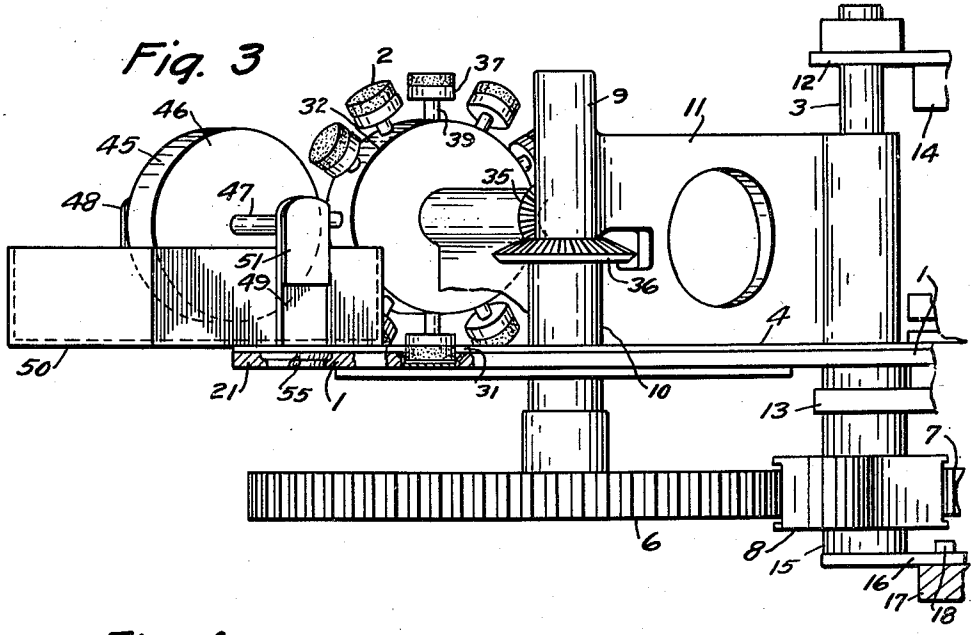


Fig. 4

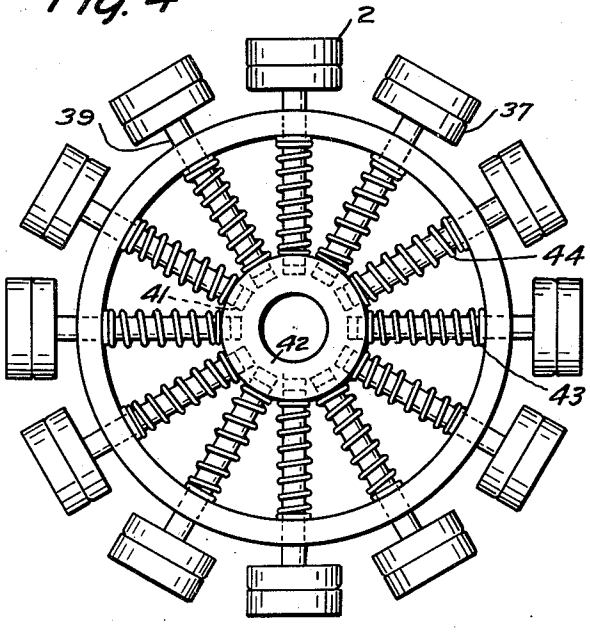
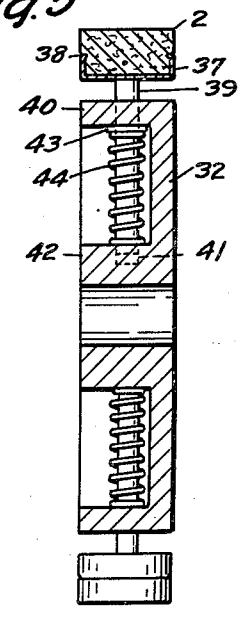


Fig. 5



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Patented Jan. 21, 1941 2,229,116

UNITED STATES PATENT OFFICE

2,229,116

BOTTLE CROWN PARAFFIN COATING DEVICE

Berthold Nagy, Brooklyn, N. Y.

Application June 29, 1939, Serial No. 281,852

9 Claims. (Cl. 91—47)

The purpose of this invention is to provide an attachment with a continuous movement for bottle crown assembly machines by which the exposed surfaces of cork liners in the crowns are automatically coated with paraffin or the like.

The invention is an attachment for the bottle crown assembly machine of my prior patent, No. 2,069,897, and comprises a delivery sprocket mounted at the dilivery point of the former machine rotated by the main gear of the machine, and a wheel having a plurality of daubers, with the daubers registering with the crowns on the said delivery sprocket and provided with means for coating the daubers with paraffin or the like, and, after being coated with paraffin, the crowns pass from the delivery sprocket to the delivery conveyor of the machine through a chute.

Other devices have been provided for placing paraffin in bottle crowns, but it has been found unsatisfactory to merely drop the paraffin in the crown, or even to spread paraffin over the cork, and, in order to coat the cork liners satisfactorily, it has been found necessary to apply the paraffin with individual daubers, in which the daubers absorb excess material and at the same time evenly spread the material over the face of the cork.

The object of this invention is, therefore, to provide an improved method for automatically coating cork liners of bottle crowns as the crowns are assembled.

Another object is to provide an attachment for bottle crown assembly machines by which the crowns may be automatically coated without interfering with the operation of the machine.

Another object is to provide means for coating corks or bottle crowns with paraffin in which excess paraffin is removed.

A further object is to provide means for coating cork liners of bottle crowns with individual daubers of absorbent material, in which the paraffin is applied to the dauber and permitted to cool slightly before it is applied to the cork liner.

A further object is to provide means for applying paraffin to cork liners of bottle crowns in which the paraffin is applied by direct pressure of daubers.

And a still further object is to provide an attachment for automatically applying a paraffin coating or the like to bottle crowns in combination with crown assembly machines which is of a simple and economical construction.

With these ends in view the invention embodies an attachment mounted upon a vertical rod supported in bearings extending outward from the machine, and with the lower end held by a brace, in which the rod supports a vertical spindle having a delivery sprocket positioned to receive bottle crowns from the assembly wheel of the machine and rotated by a gear on the spindle meshing with the large main gear of the assembling part of the machine; a plurality of daubers mounted on a rotating wheel and positioned to extend through an opening in a cover plate of the delivery sprocket, with the daubers registering with bottle crowns in the sprocket, means feeding paraffin or the like to the daubers, and a chute positioned to receive crowns from the delivery sprocket and adapted to deposit the crowns upon a delivery conveyor of the machine.

Other features and advantages of the invention will appear from the following description taken in connection with the drawings, wherein:

Figure 1 shows a plan view in outline of a bottle crown assembly machine with the paraffin attachment shown on the side thereof.

Figure 2 is a plan view of the attachment on an enlarged scale.

Figure 3 is a view showing a side elevation of the attachment with the adjacent edge of the assembly machine shown in combination therewith.

Figure 4 is a view showing a side elevation of the dauber wheel.

Figure 5 is a view showing a section through the dauber wheel.

Figure 6 is a view showing a side elevation of the paraffin tray.

Figure 7 is a detail on line 7—7 of Figure 2 showing the parts holding the crown.

Figure 8 is a detail showing the connection between the discharge chute and delivery conveyor.

In the drawings the device is shown as it may be made, wherein numeral 1 indicates the delivery sprocket, numeral 2, the daubers, and numeral 3, the rod through which the attachment is mounted on a bottle crown assembly machine.

The sprocket 1 is fixedly mounted below a cover plate 4 on a spindle 5, and on the lower end of the spindle is a gear 6 that meshes with a large gear 7 of the assembly machine. At the intersection of the two gears is a guard 8 preventing objects being drawn into the point where the gears mesh.

The spindle 5 is rotatably mounted in bearings 9 and 10 at the other end of a bracket 11, and the bracket is mounted between the extending plates 12 and 13 of the assembly machine, the plate 12 being mounted on the upper surface of the ring 14 that supports the upper ends of the plungers 19 that hold the liners in the crowns during the assembling operation. The lower end of the rod 3

is held in a bearing 15 that is provided with a lever 16 that extends over the main frame of the base of the machine indicated by the numeral 17 and to which it is attached by a bolt 18. This bracket 16 prevents the attachment turning on the rod 3, and thereby assures meshing of the gears and delivery sprocket.

As the assembly machine operates, the gear 7 rotates the spindle 5 through the gear 6, and this rotates the delivery sprocket, the recesses of which register with corresponding plungers of the large section of the assembly machine, and, as the sprocket and plungers separate, the crowns are guided into the delivery sprocket 1 by a pointed end 20 of a guard rail 21, the upper edge of the inner surface of which is provided with a recess 22 in which the extending rims of the crowns rest, and which, cooperating with the similarly grooved recesses of the delivery sprocket, holds the crowns until they pass from the point 23 to the point 24 where they are moved outward by a sloping surface 25 on a plate 26 below the delivery sprocket, the guard ring 21 terminating at the point 27. The crowns, being removed from the delivery sprocket, drop into a chute 28 which slopes outward and downward and delivers the crowns to a small cross conveyor 29 from which the crowns are removed and placed upon the delivery conveyor 30 in the usual manner.

The paraffin is applied to the cork liners of the crowns during this operation, and for this purpose a recess 31 is provided in the cover plate 4, and above this recess is a drum 32 upon which the daubers 2 are mounted. The drum 32 is mounted upon a shaft 33 rotatably held in a bearing 34, and at the inner end of the shaft is a beveled pinion 35 which meshes with a gear 36 on the spindle 5, and the ratio of these gears makes it possible for each one of the daubers to register exactly with a crown as the crown passes below the dauber drum.

In the design shown, the daubers 2, which are formed of felt or other fibrous material, are mounted in cups 37, the upper edges 38 of which are crimped inward, and these are mounted on rods 39 slidably held in openings in an outer band 40 of the drum 32, and also in openings 41 in a hub 42 at the center, the rods 39 being provided with collars 43 and resiliently held outward by springs 44. The drum is positioned so that the daubers will engage the surface 45 of a wheel 46, and the wheel is rotatably mounted on a spindle 47 in bearings 48 and 49 at the opposite sides of a reservoir formed in a tray 50 which is mounted upon the cover plate 4. The bearing 49 is provided with an outer plate 51, and the bearing 48 is provided with a similar plate 52 pivotally attached to the end of the bearing support 48 by a thumb nut 53 and arranged so that the plate 52 may be turned by loosening the thumb nut 53, thereby permitting the shaft 47 to slide into the bearing 48 so that the opposite end may slide out of the bearing 49, and the wheel and shaft may, therefore, be removed so that the wheel may be heated before starting the machine. Below the tray 50 is a gas burner 54 for continuously heating the paraffin or other material in the tray.

The chute 28 is mounted with the upper end connected to the cover plate 4, and the lower end, which is somewhat below the cover plate, is attached to the side of the cross conveyor 29, and, although the chute is illustrated as being open, it will be understood that it may be of any type or design and may be arranged in any manner. The teeth of the delivery sprocket 1 are formed with small grooves 55 to accommodate the bulging flanges at the open edges of the caps, and, as hereinbefore stated, these grooves correspond with a similar groove in the inner edge of the ring 21.

With this device mounted as illustrated and described, it will be noted that the crowns, as indicated by the numeral 56, and which are normally held by the plungers 19 bearing upon the cork liners, will be drawn out of the large portion of the assembly machine as they are released by the plungers by the plate 21 which will guide them into the recesses into the delivery sprocket 1, and the sprocket will carry them around to a position in the recess 31 below the daubers 2 so that each dauber will register with a cap and deposit paraffin on the surface thereof on the cork liner of the crown, and in the central portion thereof the same as the spot normally used in the same place, and, when a crown is not present, the paraffin will remain on the dauber. Coating the cork liners of the crowns in this manner does exactly the same as placing the spot usually of foil in the central part of the liner, and this makes it possible to accomplish the same result. When the crowns reach a position adjacent the delivery chute 28, the surface 25 moves the crowns out of the delivery sprocket and deposits them in the chute.

It will be understood that changes may be made in the construction without departing from the spirit of the invention. One of which changes may be in the use of other means for mounting the attachment on the machine, another may be in the use of other means for driving the material applying devices, and still another may be in the use of other means for returning the crowns to the delivery conveyor of the machine.

The construction will be readily understood from the foregoing description. In use the device may be attached to a bottle crown assembly machine, as shown and described, and it will be noted that, after the liners are cemented in the crowns, they are normally delivered to the delivery conveyor 30, whereas, in this device, they are picked up by the sprocket 1, and conveyed around to the chute 28, and, during this movement, paraffin or other similar material is applied to the exposed surface of the cork liners by the devices 2 on the drum 31, and operating the device in this manner makes it possible to paraffin the cork liners with a continuously operating device.

Having thus fully described the invention, what I claim as new and desire to secure by Letters Patent is:

1. In combination with an assembling machine for bottle crowns and the like, a delivery sprocket rotated by the said assembling machine and synchronized therewith, said sprocket extending into said machine and adapted to receive, in recesses in the periphery thereof, bottle crowns released by the assembling parts of the said assembling machine; said delivery sprocket adapted to move said crowns through part of a circle, a plurality of daubers resiliently mounted in a drum positioned above said delivery sprocket with the daubers adapted to register with crown holding recesses in the periphery of the sprocket, means supplying a coating substance to the surfaces of said daubers, and means removing crowns from said delivery sprocket.

2. A device, as described in claim 1, in which the means feeding the substance to the daubers comprises a storage tray and a wheel turning in

said tray, with the surface thereof engaging the surfaces of the daubers.

3. A device, as described in claim 1, in which the means feeding the substance to the daubers comprises a storage tray and a wheel turning in said tray, with the surface thereof engaging the surfaces of the daubers, said wheel having a smooth surface.

4. A device, as described in claim 1, in which the means feeding the substance to the daubers comprises a storage tray and a wheel turning in said tray, with the surface thereof engaging the surfaces of the daubers, said tray having means heating a substance therein.

5. A device, as described in claim 1, in which the means feeding the substance to the daubers comprises a storage tray and a wheel turning in said tray, with the surface thereof engaging the surfaces of the daubers, said wheel mounted to be readily removed for heating when starting.

6. A device, as described in claim 1, having a delivery chute positioned to receive crowns from the delivery sprocket and deposit them upon a delivery conveyor below said delivery sprocket,

7. In an assembling machine for bottle crowns and the like, means receiving the crowns from the assembling machine, a plurality of resilient applicators spaced to register with the crowns in the said receiving means, a rotating drum on which the said applicators are positioned, said drum synchronized with the movement of the machine and positioned with the applicators travelling in a vertical plane tangent to a circle that may be described through the centers of the crowns in the receiving means, and means supplying a coating substance to the applicators.

8. An assembling machine as described in claim 7, characterized in that the applicators are mounted on the outer ends of shafts slidable in a peripheral flange and also in a hub of the drum.

9. An assembling machine as decsribed in claim 7, characterized in that the applicators are mounted on the outer ends of shafts slidable in a peripheral flange and also in a hub of the drum with the resiliency provided by springs around the shafts between the flange and hub.

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