Feb. 1, 1938. J. BALTON 2,106,864

LABEL PLACING APPARATUS AND METHOD

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FIG. 1

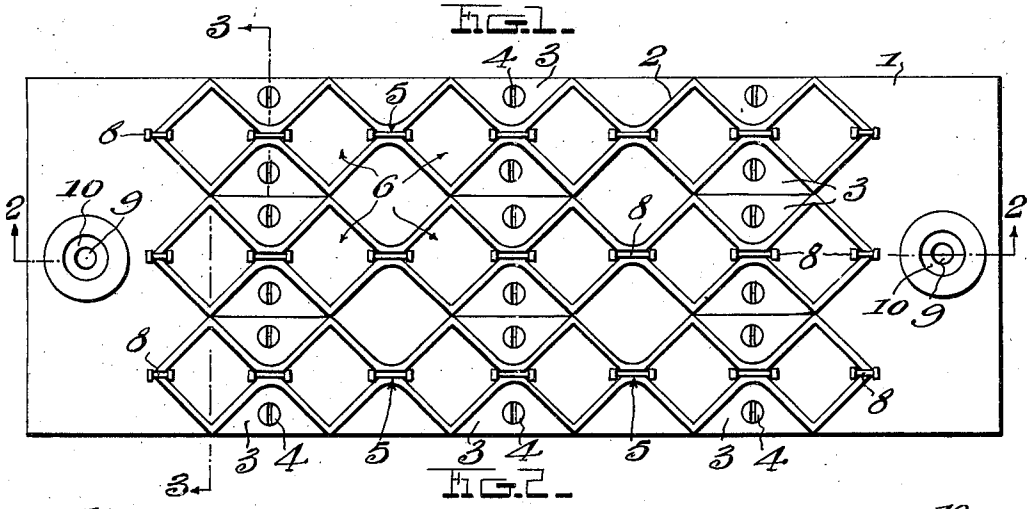


FIG. 2

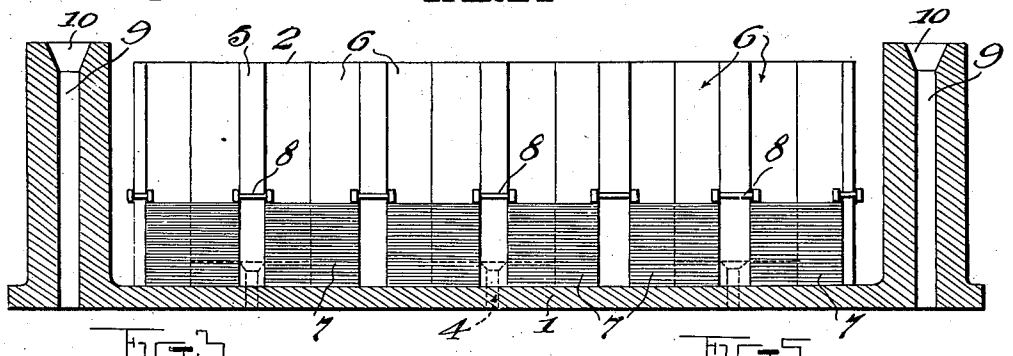


FIG. 3

FIG. 5

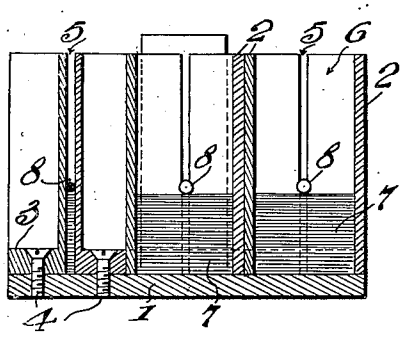
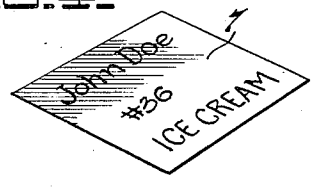
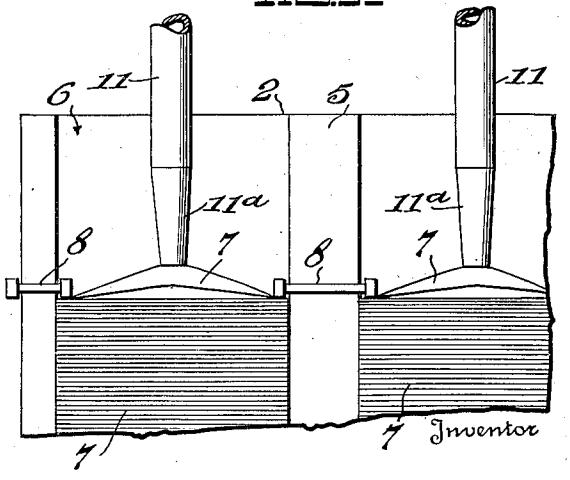


FIG. 4





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Fig. 8.

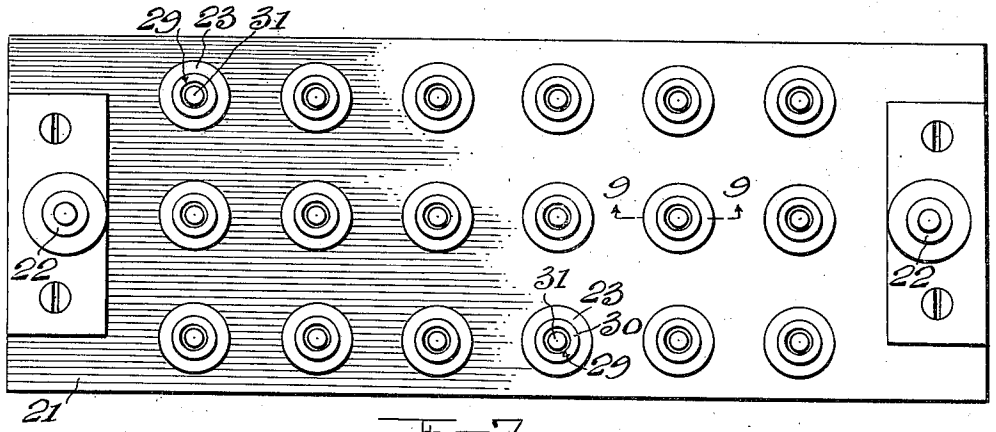


Fig. 7.

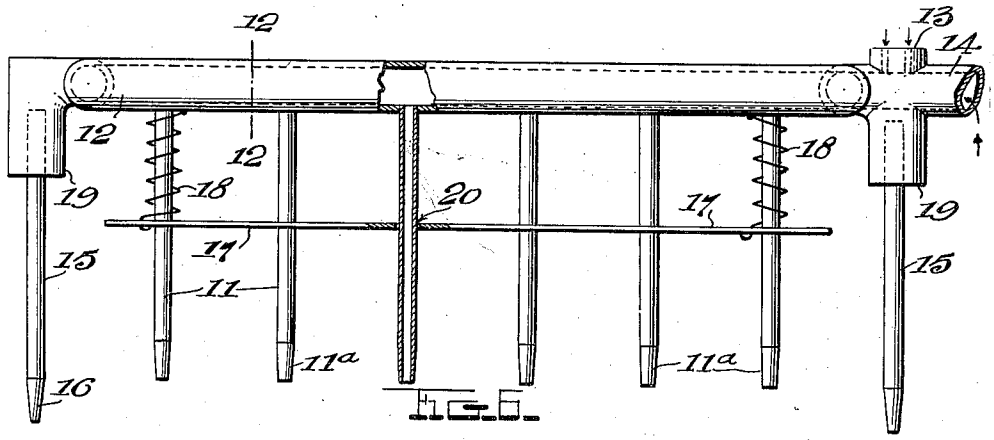
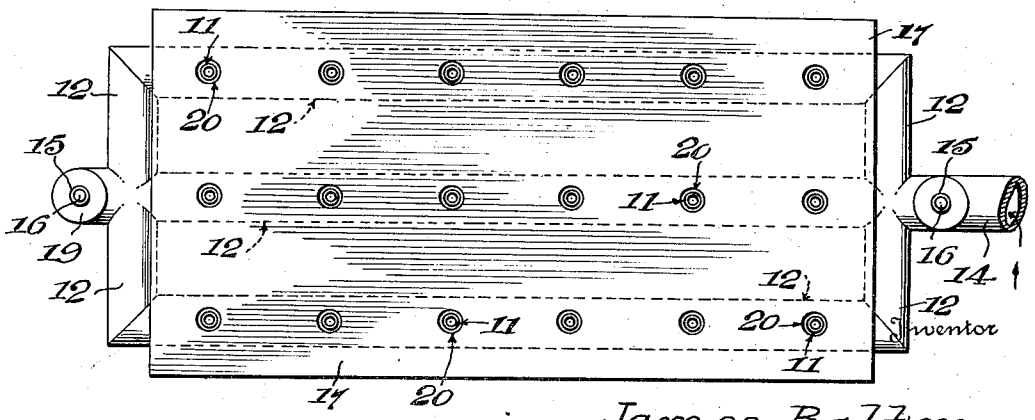


Fig. 6.



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FIG. 9.

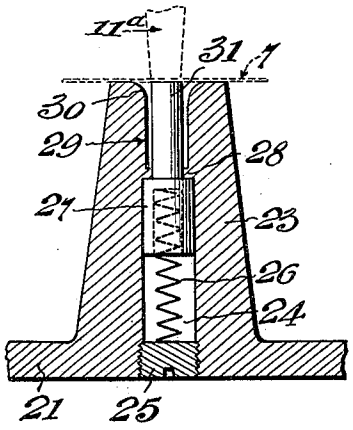


FIG. 10.

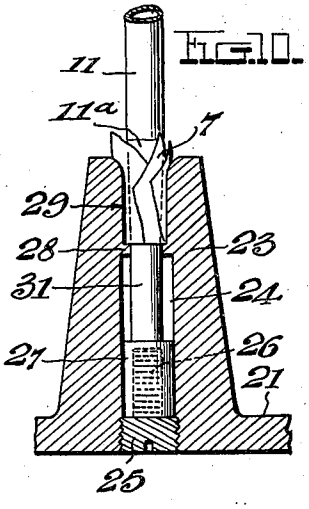


FIG. 11.

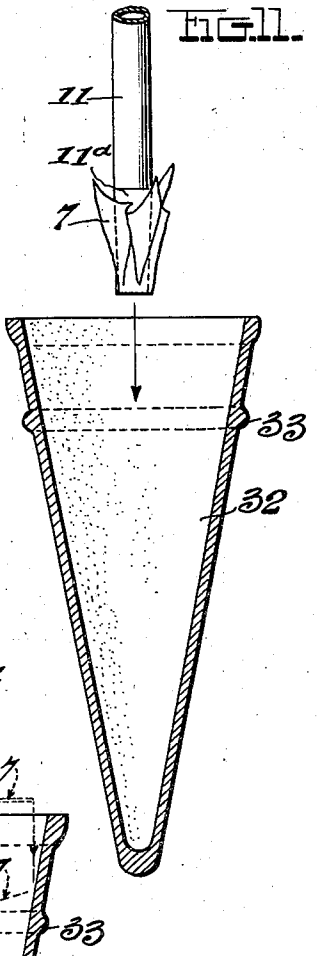


FIG. 12.

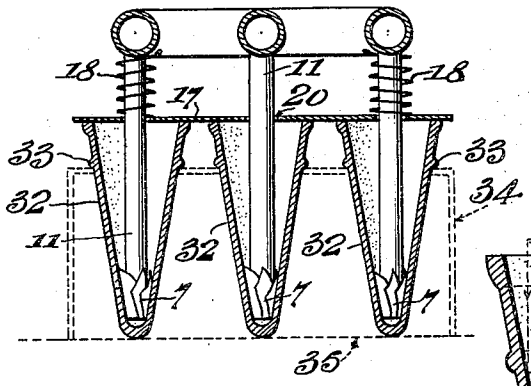


FIG. 13.

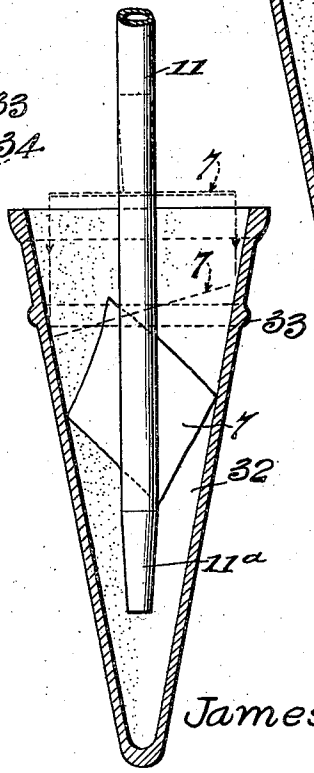
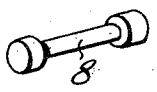


FIG. 14.



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UNITED STATES PATENT OFFICE

2,106,864

LABEL PLACING APPARATUS AND METHOD

James Balton, Baltimore, Md., assignor of one-fourth to Joseph Shapiro, Baltimore, Md., one-fourth to Isaac Shapiro, Chicago, Ill., one-fourth to Nathan Shapiro, and one-fourth to Samuel Shapiro, both of Chelsea, Mass.

Application June 2, 1936, Serial No. 83,155

9 Claims. (Cl. 216—12)

My invention relates to a certain new and useful method and apparatus for placing labels in ice cream cones, and it primarily has for its object to provide a simple method and apparatus, the apparatus being inexpensive to manufacture, easily manipulated and will readily serve its intended purposes.

Further the invention has for its object to improve a certain known method and apparatus in which the labels are picked up by suction nozzles, carried flatwise thereby and inserted in the cones, the object being to place the labels down in the lower extremity or tip of the cone; it has been found, however, that frequently, in the act of carrying the label down in the cone the label will drag against the wall of the cone, slip from a centralized position on the nozzle and be left against the side of the cone instead of at the bottom or tip. This is objectionable because, in nesting the cones the label so misplaced will become located between the inner side wall of the outer cone and the outer side wall of the inner cone so that when the inner cone is removed the edge of the label may catch in the filigree of the inner cone and be flipped out of the cone in which it is supposed to remain. Further such misplaced labels often get stuck with ice cream and the child in biting off the cone and cream may also find he has bitten off a piece of label; it is therefore the object of my invention to overcome these defects and to ensure that the labels are always placed in the bottom or point of the cone, and to make it impossible for the labels to be misplaced in the cones.

Other objects will in part be obvious and in part be pointed out hereinafter.

To the attainment of the aforesaid objects and ends the invention still further resides in the novel details of construction, combination and arrangement of parts, all of which will be first fully described in the following detailed description, and then be particularly pointed out in the appended claims, reference being had to the accompanying drawings in which:—

Fig. 1 is a top plan view of a label magazine used as a part of my apparatus.

Fig. 2 is a vertical longitudinal section of the same on the line 2—2 of Fig. 1.

Fig. 3 is a vertical cross section on the line 3—3 of Fig. 1.

Fig. 4 is a detail perspective view of a label.

Fig. 5 is an enlarged detail view illustrating the action of lifting the top labels off the piles by the suction nozzles the weights holding the other labels down.

Fig. 6 is an inverted plan view of the suction nozzles and suction head which carries the same.

Fig. 7 is a side elevation, parts being broken away, of the suction head and nozzles unit.

Fig. 8 is a top plan view of the label folder for folding the labels up around the nozzle tips into somewhat the form of cornucopias.

Fig. 9 is an enlarged detail section on the line 9—9 of Fig. 8.

Fig. 10 is a view of the folder detail shown in Fig. 9 and illustrating its manner of use.

Fig. 11 is a detail view showing the step of inserting a label into a cone by the use of my invention.

Fig. 12 is a detail view showing how the cones are held down while the labels are being placed, so the cones will not lift by the frictional contact between cone, label and nozzle as the nozzle is withdrawn.

Fig. 13 is a detail view showing how unfolded labels are misplaced when my invention is not used.

Fig. 14 is a detail perspective view of one of the weights shown in Fig. 1.

In the drawings in which like numbers and letters of reference indicate like parts in all the figures 1 is a base plate on which are mounted a set of zig-zag castings 2 arranged in pairs and spaced slightly apart to leave slots 5. The castings 2 are secured in place in any suitable way as by screws 4 for instance, and the several pairs provide a set of square (or other desired shape) magazines or pockets 6 in which the labels 7 are stacked. Weights 8, consisting of thin rods with heads, ride up and down in the slots 5, the heads resting on the adjacent corners of the labels as shown in Figs. 2, 3, and 5.

9 designates two tubular guides with flared entrances 10, one being located at either end of the base 1 to receive the guide or centering pins 15 of the nozzle-head unit (see Fig. 7).

The nozzle-head unit comprises a tubular frame 12 closed except where it joins the nozzles 11 and the duct 14 from the source of suction. The nozzles 11 correspond in numbers and location to the numbers and location of label pockets 6. The nozzles are tubular of course and have their ends tapered or of frusto-conical form as at 11a. The frame 12 has a thumb controlled air ported area 13 which when open reduces more or less the suction at the nozzle ends thus making the use of a foot control valve such as the Johnson apparatus employs for example, unnecessary. When all ports 13 are uncovered the suction at

the nozzle tips is not sufficient to hold the labels 7 thereto.

Loosely suspended by springs 18 and having holes 20 to pass the nozzles 11 is a plate 17 which serves as a means to hold the cones 32 down in their racks 34 (which may be the cardboard supports used in packing and shipping cones) as the nozzles are lifted out after having inserted and placed the labels in the cones (see Fig. 12).

In carrying out my method the nozzles are first lowered into the magazine pockets 6 while holding the head at either end and closing ports 13 by the thumb of the operator's hand; each nozzle picks up a label at its center.

The nozzles are withdrawn from the magazines and with the labels adhering thereto are placed on the plungers 31 in the folders 23, (see Fig. 9) and pressed down (see Fig. 10) thereby folding the labels around the nozzle ends 11*a*. It should here be stated the folders 23 each have bores 24 entering from the bottom and plugged as at 25, the bore 24 being reduced to present a shoulder 28 against which a piston 27 in the bore 24 is urged by a spring 26. The piston 27 carries the plunger 31, a bore 29 being provided to receive nozzle end 11*a* and label 7 (see Figs. 9 and 10) and to facilitate the folding, the entrance to bore 29 is flared or rounded as at 30.

After pressing the labels into the folders 23 the nozzles are again lifted, with the labels folded around the ends 11*c* (see Fig. 11).

The nozzles with the adhering folded labels are then inserted into the cones (see Fig. 12), the suction broken by removing the thumb from holes 13 leaving the labels in the extreme lower ends of the cones.

Any suitable printed matter may be placed on the labels.

From the foregoing description taken in connection with the accompanying drawings it is thought the complete construction and method of operating the apparatus will be clear to those skilled in the art. While I have shown an efficient simple apparatus for carrying out my method it is obvious the method may be conducted in other ways. For example the labels may be folded over and around the nozzle ends by hand if desired, altho the use of the mechanical folders greatly facilitates matters.

What I claim is:

1. The method of placing a label in cup pastry which consists in placing an end of a rod-like member on a flat label at approximately its center, causing the label temporarily to adhere to the end of the rod-like member, folding the label over and around the end of the rod-like member into a cup-like form, carrying the label by the rod-like member in its folded condition into the cup pastry to the bottom thereof, and then releasing the label from the rod-like member and withdrawing the rod-like member.

2. The method of placing a label in an ice cream cone, which consists in taking a tube, placing one end thereof on the face of a label, establishing a negative air pressure in the tube to hold the label to the end of the tube, folding the label around the end of the tube until the label assumes an approximately conical form, carrying the folded label by means of the tube over an ice cream cone held mouth up, lowering the tube and label into the cone until the label rests in the tip of the cone, increasing the air pressure in the tube to atmospheric, and then while holding the cone down, lifting the tube out of the cone, leaving the label in the tip of the cone.

3. In apparatus for labeling cup pastry, a tube, means temporarily to establish a negative air pressure in the tube to hold a label to the end of the tube, a label folder into which the label and tube are insertable and having means to fold the label around the end of the tube into a cup-like form.

4. In apparatus for labeling cup pastry, a tube, means temporarily to establish a negative air pressure in the tube to hold a label to the end of the tube, a label folder into which the label and tube are insertable and having means to fold the label around the end of the tube into a cup-like form, said folder including a receding plunger and means continuously tending to urge the plunger outwardly.

5. In labeling apparatus for the purposes described, a nozzle-head unit comprising a tubular frame, having provision for connection with a source of suction, nozzle-tubes carried by and communicating with said frame to establish suction at the nozzle-tube ends, and a cone hold-down plate floatingly and resiliently carried by said nozzle-head unit and having holes to permit passage of said nozzle-tubes.

6. In labeling apparatus, a magazine for labels comprising a base plate, a set of castings each formed with half pockets and located upon said base plate in opposed relation to provide label pockets, parts of one casting being spaced from corresponding parts of the other to provide vertical slots in the side walls of said pockets, and weight members comprising rods located in the slots and heads on the ends of the rods within the label pockets for purposes described.

7. In labeling apparatus, a tube having a tapered operating end in combination with a label folder comprising a body having a tubular socket, a spring pressed plunger in said socket, the mouth of said socket being formed to receive said operating end with a label held between said operating end and said plunger, to fold the label up around said operating end as the plunger recedes under pressure exerted on said tube, substantially as shown and described.

8. The method of placing a label in the tip of an ice cream cone which consists in taking a flat polygonal label and forming it into a cup shape by folding it around the end of a rod-like member and causing it to adhere to said rod-like member and then inserting the label closed-end down into a cone and then releasing the label from said rod-like member.

9. The method of placing a label in the tip of an ice cream cone which consists in taking a flat polygonal label and forming it into a cup shape by folding it around the end of a rod-like member and causing it to adhere to said rod-like member and then inserting the label closed-end down into a cone by means of said member until the edges of said cup-shaped label engage with the wall of the cone, then releasing the label from the rod-like member then withdrawing said member.

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