

May 30, 1939.

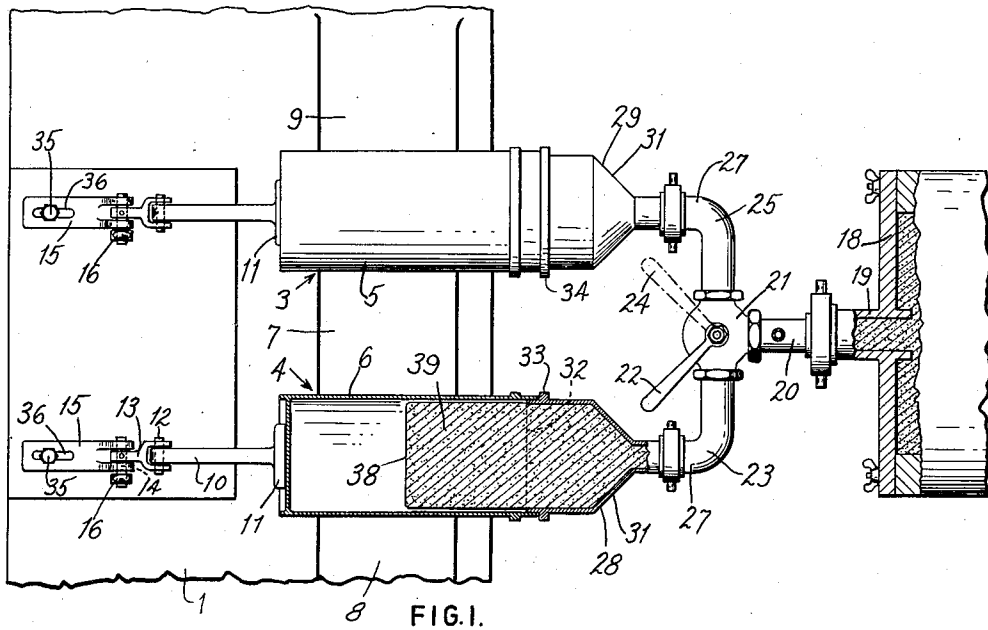
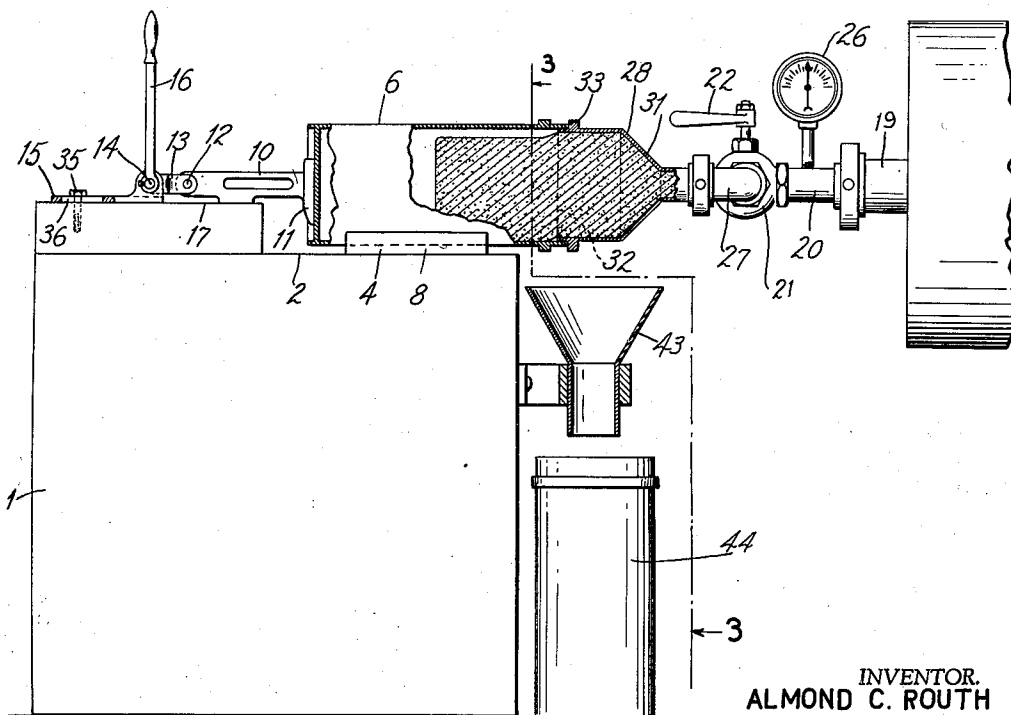
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2,160,285

MATERIAL PACKAGING METHOD AND MEANS

Filed April 28, 1937

3 Sheets-Sheet 1



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2,160,285

MATERIAL PACKAGING METHOD AND MEANS

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3 Sheets-Sheet 2

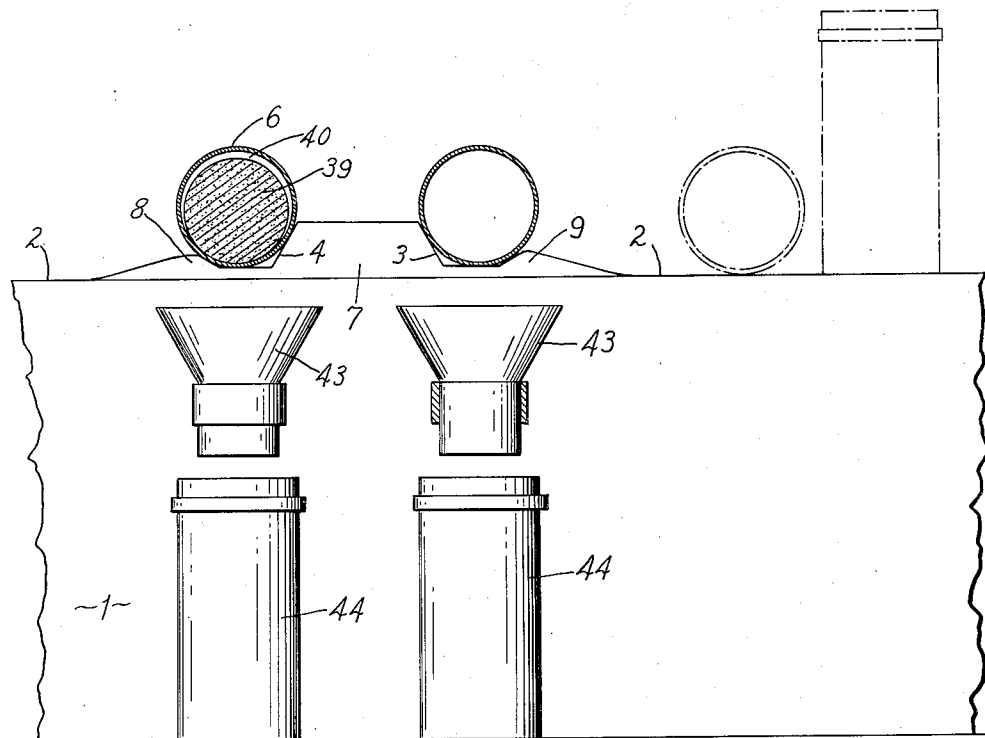


FIG. 3.

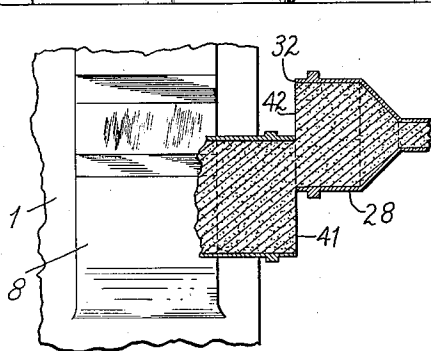


FIG. 5.

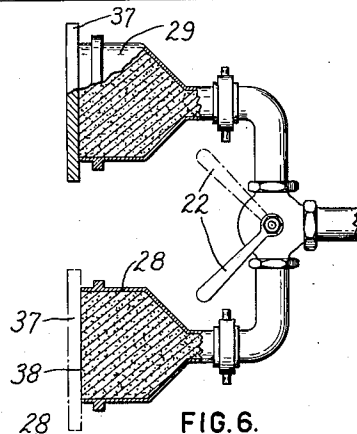


FIG. 6.

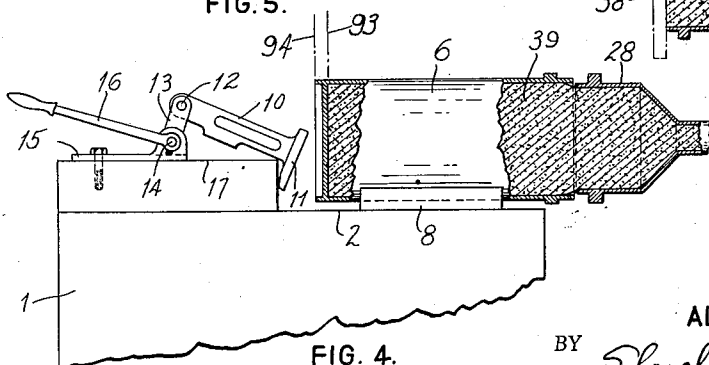


FIG. 4.

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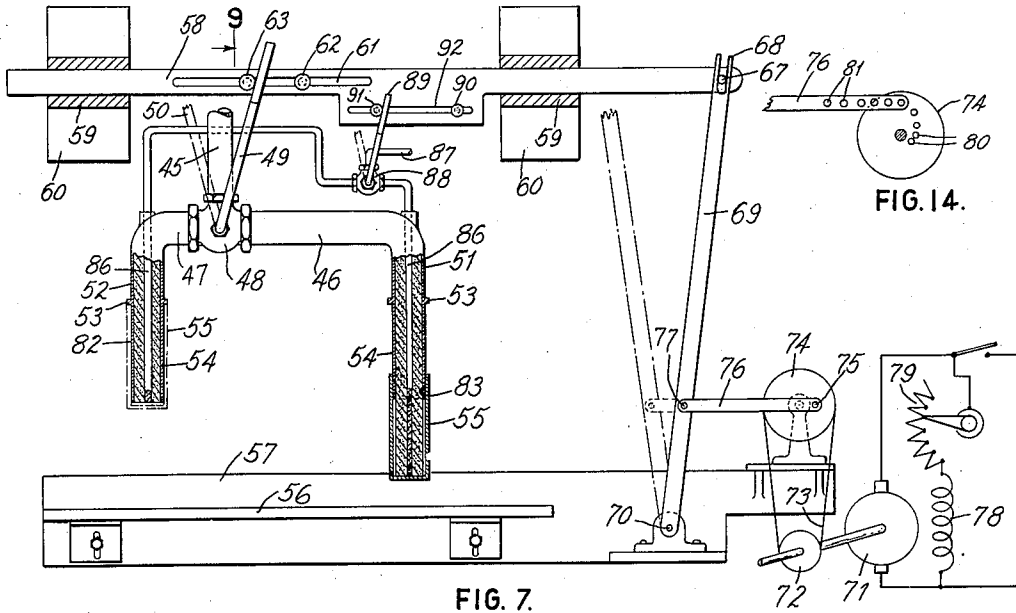
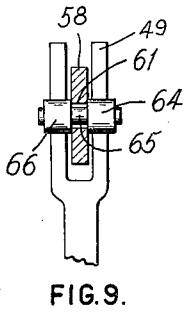
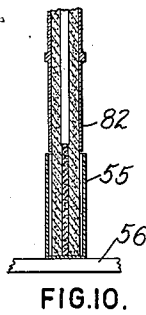
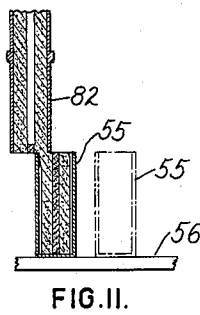
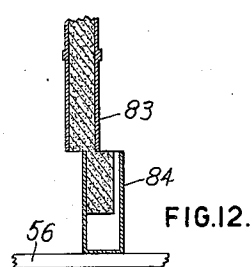
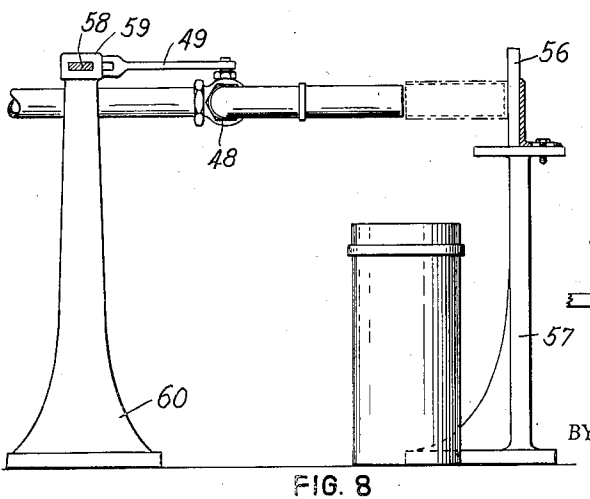
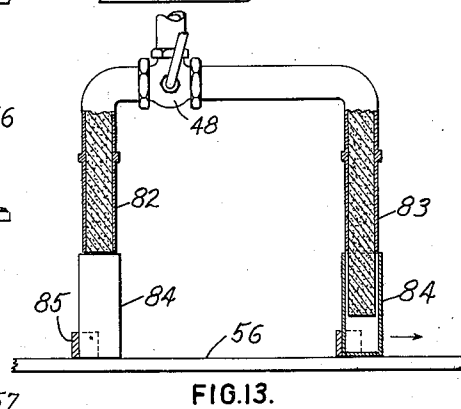
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2,160,285

MATERIAL PACKAGING METHOD AND MEANS

Filed April 28, 1937

3 Sheets-Sheet 3



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2,160,285

MATERIAL PACKAGING METHOD AND MEANS

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Application April 28, 1937, Serial No. 139,380

8 Claims. (Cl. 226—125)

This invention relates to packaging methods and apparatus and particularly when applied to the packaging of semi-fluid materials, such for example as lard, mayonnaise, ice cream, cosmetic creams, etc., when supplied to the packaging apparatus from a source of reservoir.

Inasmuch as the physical characteristics of such materials are substantially the same, so far as concerns the mechanical handling and packaging thereof, I have chosen one material, namely, ice cream, and will illustrate and describe the invention herein as applied to the packaging thereof.

Among the objects of the invention are:

To provide generally an improved method and apparatus for packaging semi-fluid materials;

To provide an improved method and apparatus for filling a succession of containers of like size with like measured quantities of semi-fluid material;

To provide an apparatus and method for accurately measuring off like quantities of semi-fluid material;

To provide a method and apparatus for filling deep containers or receptacles with semi-fluid material, such for example as ice cream;

To provide an improved method and apparatus for accomplishing the above objects with semi-fluid plastic material continuously or intermittently supplied through conduit means from a source.

Other objects will be apparent to those skilled in the art to which my invention appertains.

My invention is fully disclosed in the following description taken in connection with the accompanying drawings in which:

Fig. 1 is a top plan view partly in section of an embodiment of my invention applied to the filling of large cans, such for example as five-gallon cans, with ice cream supplied continuously from a continuous freezer;

Fig. 2 is a side elevational view of the embodiment of Fig. 1;

Fig. 3 is a cross sectional partly elevational view taken from the plane 3—3 of Fig. 2;

Fig. 4 is a fragmentary view similar to parts of Fig. 2 but illustrating operative parts thereof in different positions;

Fig. 5 is a fragmentary view similar to a part of Fig. 1 illustrating a step in the method of can filling;

Fig. 6 is a fragmentary view similar to a part of Fig. 1 illustrating a step in the process of can filling;

Fig. 7 is a top plan view of another embodi-

ment of my invention illustrating it as applied to the filling of small containers, containing each an individual portion of ice cream;

Fig. 8 is a side elevational view taken from the left hand side of Fig. 7;

Fig. 9 is a fragmentary sectional view taken from the plane 9 of Fig. 7 and drawn to a larger scale;

Figs. 10 and 11 taken in connection with Fig. 7 illustrate successive steps of the process of filling the containers;

Figs. 12 and 13 illustrate another mode of operation of the apparatus of Figs. 7 and 8, these figures illustrating steps in the process of filling a small container.

Fig. 14 is view similar to a part of Fig. 7 but illustrating a modification.

Referring to the drawings Figs. 1 to 6 inclusive, I have shown at 1 an elevated bench, block of concrete, platform or the like upon which some of the parts of the apparatus are mounted at a height convenient to the hands of operators, so that they can handle the cans to be filled and operate the apparatus without stooping as will appear later.

Upon the upper surface 2 of the support 1 is a pair of cradles indicated generally at 3 and 4. These cradles are for the purpose of centering and positioning a pair of cans 5 and 6 to be filled, and the cradles may be very simply made by providing a center block 7 against which the inner sides of the cans may rest and a pair of outer blocks 8 and 9 at the outsides of the cans, the blocks resting on the upper surface 2 of the main support. The cradles 3 and 4 are thus in the form of grooves with the outside of the grooves in both cases low so that the can may readily be rolled thereover out of the cradle and onto the surface 2, as will be described hereinafter.

Behind each cradle, or when the cans 5 and 6 are lying in the cradles, behind each can is a ram comprising a thrust element 10 having on its outer end a foot 11 and at its inner end pivoted at 12 to a short arm 13 rigidly connected to a shaft 14 supported in bearings in a bearing piece 15 and extending laterally therefrom and having rigidly secured thereto a handle 16. By rocking the handle 16 clockwise as viewed in Figs. 2 and 4, the foot 11 will be projected forwardly and will engage the bottom of the can and force the can forwardly for a purpose to be described, the arm 13 and the thrust element 10 acting as a toggle to hold the foot 11 forwardly and prevent its being forced backwardly; and

to this end, the thrust element 10 may rest upon the surface 17 which is elevated above the surface 2 to support the bearing pieces 15—15. The handle 16 may rock around the end of the surface 17 as shown in Fig. 4 when it is rocked counter-clockwise at which time the foot 11 is completely withdrawn out of the way of the can bottom so that the can may be rolled laterally away therefrom in the operation to be described.

At 18 is the end plate of a continuous ice cream freezer and at 19 the discharge spout out of which ice cream continuously made in the freezer is continuously discharged preferably in the form of a bar of form sustaining hardness. The construction and operation of this freezer constitutes no essential part of the present invention and any freezer which will continuously supply frozen ice cream to the spout 19 may be used.

One such suitable freezer is shown in my Patent No. 2,067,683 issued January 12, 1937, for improvements in Ice cream manufacturing apparatus and another is shown in my co-pending application, Serial No. 141,185, filed May 6, 1937, for improvements in Ice cream making methods and apparatus to which reference may be had.

At this time it may be stated that when other materials than ice cream are supplied to the packaging apparatus, the end plate 18 may represent part of the source or reservoir or processing apparatus from which such material is supplied.

Referring again to the drawings, a short pipe 20 is coupled to the spout 19 at one end and at the other end is connected to a two-way valve 21 having a handle 22 which, in the position illustrated in solid line, opens the valve to discharge ice cream into a lateral elbow 23 and when thrown into the other extreme position indicated in dotted line at 24, directs ice cream into an elbow 25.

A pressure gauge 26 is connected to the short pipe 20 to indicate the pressure of ice cream therein. The elbows 23 and 25 terminate each in parallel legs 27—27 which are coupled to funnel shaped heads 28 and 29. These heads comprise cone-shaped bodies 31—31 preferably of frusto-conical form increasing in diameter outwardly from the point of coupling to the legs 27—27, are open at their ends 32—32 and preferably formed from thin wall sheet metal and having near the open end 32 external flanges 33 and 34. The outside diameter of the open end of the heads is such that the inside of the open end of the cans to be filled will telescope thereover with a loose fit.

In the operation of the apparatus thus far described, cans 5 and 6 are placed in the cradles 3 and 4 and the levers 16—16 are rocked forwardly causing the feet 11—11 to propel the cans forwardly and to telescope their outer open ends over the open ends 32—32 of the heads 28—29 and to cause them to abut upon the flanges 33 and 34 of the heads 28—29.

The heads 28 and 29 are rigidly supported upon the conduit structure including the elbows 23 and 25 and therefore the engagement with the flanges 33 and 34 may be a pressure engagement and in order that the toggle arrangement 13—10—12 above described may set, the bearing pieces 15—15 may be adjusted on the surface 17 by means of the screw 35 which projects through a slot 36 in the bearing piece and is threaded into the main support.

The parts are now in their working position but it should be stated that when the apparatus is initially put into operation, the heads 28 and

29 must, so to speak, be primed in the following manner.

Referring to Fig. 6, a board or other cover 37 is placed over the open end of one of the heads, say the head 29, and the valve handle 22 is turned to the dotted line position in Fig. 6 and ice cream flows into the head 29 finally completely filling it, forcing the air out of the open end of the head and under the board 37 so that when it is ultimately completely filled and the board 37 is removed, there will be a wall or face of ice cream across the open end of the head. In a similar way, the head 28 is filled providing such a wall or face 38 by turning the handle 22 to the solid line position, in this case the face already having been made and the board 37 shown in broken line having been removed.

The heads are in this condition when the open ends of the cans 5 and 6 are telescoped thereover as above described. With the parts assembled as described, the handle 22 is turned to the solid line position in Fig. 1 and ice cream flows from the freezer through the elbow 23 into the head 28 and I have found that the mass of ice cream in the head 28 will be propelled forwardly, being replenished from behind by ice cream from the elbow 23 and the said face 38 will move into the can substantially without distortion, one position of its continuous movement being illustrated in Fig. 1 at 38.

It will be noted that the inside diameter of the head 28 at its open end will be slightly smaller than the inside diameter of the can because of the fact that the can is telescoped outwardly over the open end of the head and therefore the cylinder of ice cream which is thus propelled into the can will be slightly smaller than the inside of the can and will fall by gravity to the lower side of the can. This is illustrated in Fig. 3 where the cylindrical mass of ice cream is shown at 39 and the space at 40 is caused by the settling of the mass 39 to the bottom of the can 6.

The air between the bottom of the can and the face 38, as the latter progresses toward the bottom, escapes outwardly through the space 40 and is forced out through the loose fit cracks at the open end of the can.

While the can is filling, in this manner, the pressure gauge 26 will indicate a certain normal pressure, for example 60 lbs. per sq. in. and this pressure will be maintained throughout the filling of the can. When the face 38 of ice cream however has reached the bottom of the can, the pressure behind it, that is to say in the pipe 23 and elbow 23, will start to rise and the ice cream now within the can and within the head 28 will be put under accumulating pressure, the pressure being supplied as will be understood, by the ice cream making machine which is always provided with some means to forcibly propel the ice cream continuously through it. This increase in pressure will cause the ice cream mass 39 in the can to expand and completely fill it, filling the air space 40. The operator of the apparatus watches the gauge 26 and when the pressure has risen to a predetermined amount, such for example as 70 lbs. or 80 lbs. per sq. in., the operator then throws the handle 22 to the other position or in the case of Fig. 1, the dotted line position 24, which shuts off the supply of ice cream to the head 28 and begins to supply it to the head 29 to fill the can 5, as has just been described for the can 6.

The ice cream in the can 6 is now under the pressure at which the supply was cut off. It is now time to remove the filled can 6 and to this

end, the operator rocks the lever 16 from the position of Fig. 1 to that of Fig. 4 withdrawing the foot 11 and the ice cream expands because of the pressure thereon and moves the can 6 away from the head 28 until the open end of the can thus clears the open end 32 of the head.

In all continuous ice cream making machinery, it is customary to incorporate into the ice cream a measured quantity of air causing the ice cream to have increased volume or "overrun." When such air-incorporated ice cream is put under pressure, it tends to contract and when the pressure is relieved, it expands. It is this expansion which is utilized in the practice of my invention to disconnect the can from the head and the amount of expansion and therefore the amount of retractile movement of the can will be in proportion to the excess pressure on the ice cream. For example, I have found that with a five gallon can 9" in diameter and 20" long and with a normal amount of overrun, if the pressure is raised to 70 lbs. on the gauge before shutting off, the can will be moved backwardly $\frac{1}{4}$ "; or if the pressure is raised to 80 lbs. the can will be moved $\frac{1}{2}$ ", these quantities being approximate.

The forward and rearward positions of the can are indicated by the lines 93 and 94 of Fig. 4.

The can having been retracted by expansion, the operator rolls the can laterally out of the cradle, that is to say over the outer block 8 and onto the surface 2 and places an empty can on the cradle and raises the lever 16 to the position of Fig. 1 to propel the can into engagement with the head flange as described above preparatory to filling. In the meantime, the can 5 has filled, the pressure has risen and the handle is then thrown to fill the can 6, and the pressure is released from the can by allowing it to be retracted upon operation of the lever 16 for that can and it is correspondingly rolled laterally out of the cradle over the outer block 9 onto the surface 2. The cans thus filled may be covered with lids or otherwise and are ready for removal from the apparatus. It is to be particularly observed that, in connection with Fig. 5 and Fig. 4, since the can is retracted so that its open end barely clears the end 32 of the head, when the can is rolled out of the cradle the ice cream is sheared off leaving a face or wall 41 on the ice cream in the can and a corresponding face or wall 42 on the ice cream in the head. The can is thus filled exactly full and the head is left with a filling of ice cream so that it does not have to be again primed as described above in connection with Fig. 6 for successive can fillings.

I have found that cans can be filled with a very high degree of accuracy, that is to say a succession of cans of the same volumetric content being filled to very accurately the same weight of ice cream.

In some cases, the operator may allow the pressure to rise too far and therefore the can may be retracted so far that when it is rolled laterally to shear off the ice cream some of it may fall out downwardly between the end of the can and the end of the head. To take care of these abnormal operations, a funnel 43 is supported directly under the juncture of the can end and the head and discharges downwardly into a can 44 which may be placed thereunder to receive such accidentally dropped ice cream, so that the floor and all other parts of the apparatus may be easily kept clean and sanitary.

In Figs. 7 to 14 is illustrated an embodiment of my invention in an apparatus for rapidly fill-

ing small containers or packages of ice cream of individual saleable size.

At 45 is shown a pipe into which ice cream may be continuously forced from a continuous ice cream making machine, it being thought unnecessary to illustrate or describe more of the machine in view of the more complete description in connection with the first described form. The pipe 45 supplies the ice cream to elbows 46 and 47 through a two-way valve 48 operated by a valve arm 49 which may be thrown from the solid line position illustrated in which the ice cream is supplied to the elbow 46, to the dotted line position 50 in which the ice cream is cut off from the elbow 46 and supplied to the elbow 47.

The elbows 46 and 47 comprise parallel portions 51 and 52 provided at a suitable distance from their open ends each with a flange 53—53. The end portions 54—54 beyond the flanges 53—53 are preferably of designed or predetermined cross sectional form, the most common form being circular. One of the receptacles to be filled is shown at 55 and is preferably a cardboard container of cylindrical form open at the upper end but adapted to have a lid fitted thereon. At 56 is a vertical table supported on a stand 57 opposite the discharge end of the elbows, to be more fully described.

Means is provided to automatically and periodically repeatedly throw the valve arm from one position to the other as follows. A bar 58 is mounted reciprocally in spaced bearings 59—59 supported on standards 60—60. The bar 58 is preferably rectangular but may be round and in the latter case, means well known would be provided to prevent it from rotating.

The bar is provided with a slot 61 therein by which adjustable spaced stops 62 and 63 are mounted on the bar. The stops, shown in Figs. 7 and 9, may be variously constructed but in the form illustrated comprise a head 64 having a shank 65 projected through the slot 61 and having another head 66 threaded thereon and thereby clamping the two heads on opposite sides of the bar. By loosening the head 66, the shank 65 may be slid along the slot 61 and then the head may be tightened again to adjustably position the heads along the slot. The arm 49 is preferably forked, as shown in Fig. 9, the two arms of the fork embracing the bar 58 therebetween and engaging the two parts of the stop on each side of the bar.

By this means, when the bar 58 is moved toward the left as viewed in Fig. 7, the stop 62 will engage the arm 49 and move it to the dotted position 50 and vice versa when the bar moves in the other direction, the stop 63 will move the arm back to the solid line position shown, and the arm 49 in these two positions, as stated above, cutting off the flow of ice cream from one elbow and initiating it in another.

To reciprocate the bar 58, the right hand end as viewed in Fig. 7 has a pin 67 projecting through a slot 68 in a lever 69 at one end, the other end of the lever being pivoted as at 70 upon the table 56. A motor 71 by means of a pulley 72 and belt 73 drives a crank wheel 74 having a crank pin 75, the pin being connected by a rod 76 with the lever 69 at 77 between its ends.

The motor 71 is preferably an adjustable speed motor and in the drawings is shown as a direct current motor having a field 78 provided with a field rheostat 79 by which the speed may be varied. Obviously other means of providing variable speed of the crank wheel 74 may be provided.

As will now be clear, when the motor 71 is energized, the lever 69 will be oscillated back and forth to effect the above described throw of the arm 49; and by adjusting the speed of the motor 71, the amount of ice cream allowed to pass the valve between throws may be adjusted and the quantities of ice cream thereby measured.

The stops 62—63 may be set to adjust the throw of the valve in each direction but it may also be desired to adjust the velocity with which the arm 49 moves and for this purpose the rod 76 may be adjustably connected to the wheel 74 by the arrangement shown in Fig. 14 which provides a plurality of holes 80—80 in the wheel for the pivot 75 and a plurality of holes 81—81 corresponding thereto, in the rod 76.

In general, there are two modes of operation for the apparatus above described. In the first mode of operation, a receptacle 55 as shown in broken line in Fig. 7 is telescoped over the nozzle 82 provided by the continuation of the straight portion 52 of the elbow 47 and the upper end of the receptacle is stopped on the flange 53 to position it. When the arm 49 is turned toward the left, ice cream will be forced out of the nozzle and into the receptacle shoving it downwardly over the nozzle. This action is illustrated in solid line for the nozzle 83 corresponding to the nozzle 82, the receptacle 55 in this case being partway pushed off of the nozzle. As the ice cream continues to be discharged, the receptacle 55 will be pushed all the way out of the nozzle until the bottom thereof is stopped on the table 56. The arm 49 is so timed that at this instant, the flow of ice cream is cut off and diverted into the other nozzle on which another receptacle has, in the meantime, been telescoped.

The parts are now in the position illustrated in Fig. 10 and the operator moves the container 55 laterally, that is to say toward the right for example, the parts taking up the position of Fig. 11 in solid line wherein it will be seen that the ice cream is sheared off from the end of the nozzle 82 and from the end of the receptacle 55 leaving the receptacle and the nozzle both completely full. Finally the receptacle 55 reaches the position shown in dotted line in Fig. 11 and the operation is complete, the receptacle containing a measured portion of ice cream and the nozzle being filled and ready for another operation.

Inasmuch as the container telescopes over the nozzle, the diameter of the container will be slightly larger than the ice cream extruded into it and the air therefore can move outwardly around the ice cream from the container.

In the other mode of operation illustrated in Figs. 12 and 13, the container as shown in Fig. 13 at 84 in broken line is not telescoped over the nozzle 82 but is aligned therewith directly thereunder by means of a cradle 85 on the table 56 in which the receptacle is placed. The operation is illustrated for the nozzle 83 at the right hand part of Fig. 13 in which the receptacle 84 is partly filled. The inside diameter of the receptacle 84 may be slightly larger than that of the nozzle 83 so that the ice cream extruded into it will expel the air out from the container and will not trap air in the container.

It will be observed that it is not necessary to fill the container entirely full although it may be so filled if desired. In Fig. 13, the container has been filled about two-thirds full and the flow of ice cream is shut off at that point. The

container is then moved toward the right as indicated in Fig. 12 shearing off the ice cream at the nozzle 83 and at the top of the container itself, leaving in the container a measured quantity of ice cream which may be a container full or any desired fraction thereof.

In the patent to Herron, No. 2,042,940 issued June 2, 1936, there is illustrated and described a method and apparatus for making extruded ice cream with a core therein filled with flavoring material. Ice cream with a flavor filled core may be packed in the containers by the method and apparatus of Figs. 7 to 14. As indicated in Fig. 7, a tube 86 is projected axially into each of the nozzles 82 and 83, Fig. 7, and sealedly passes upwardly outwardly through the walls of the elbows 46 and 47 and communicates with a supply pipe 87 through a two-way valve 88 under the control of an arm 89. The pipe 87 may be connected to a source of syrup and when the valve is operated by movement of the arm 89 toward the right, it will direct the syrup into the nozzle 83 and when it is moved into the dotted line position toward the left, it will direct the syrup into the nozzle 82 and the filled core will be formed in the ice cream as described in said Herron patent.

The arm 89 may be operated by the bar 88 as described for the bar 49 by means of a pair of stops 90 and 91 adjustable longitudinally in a slot 92.

It will be understood, of course, that the syrup tubes 86—86 may be used with either of the modes of operation of Fig. 7 or Fig. 13 or may be omitted with either mode.

In the above description, I have described two embodiments by which my invention may be practiced. Obviously, my invention is not limited to the exact details and construction illustrated and described nor to these two embodiments; and it will be understood that changes and modifications may be made within the spirit of my invention without sacrificing its advantages and within the scope of the appended claims.

I claim:

1. The method of placing in each of a succession of containers a like measured quantity of semi-fluid form-sustaining material supplied to a discharge nozzle from a material source at a point spaced from the discharge end of the nozzle, which includes filling the nozzle to the end thereof, positioning one of the containers over the nozzle, causing the material to be supplied to the nozzle and to be extruded out of the nozzle in the form of a bar and to be deposited in the container substantially without change of its extruded form thereby progressively filling the container from the open end thereof to the base, stopping the flow of material when a predetermined quantity has been extruded, moving the container longitudinally and then laterally with respect to the nozzle end to shear off the bar by the walls of the container and of the nozzle, leaving the nozzle filled substantially to the end, and so on repeatedly with a succession of containers.

2. The method of filling a series of open mouth containers each with a like measured quantity of form sustaining material extruded from a nozzle, which includes starting with the nozzle filled to the end thereof, then positioning the mouth of one of the containers over the nozzle and disposing the mouth closely adjacent to the end of the nozzle, starting the extrusion of material from the nozzle in a form-sustaining bar,

receiving the bar in the container to progressively fill the container from the open end thereof to the base, stopping the extrusion when a predetermined quantity has been extruded, moving the container longitudinally and laterally to cause its mouth to shear off the bar at the nozzle end and causing the nozzle to shear off the bar at the container mouth, leaving the nozzle filled to its end, and so on with each of the series of containers.

3. The method of filling a series of tubular walled open mouth containers each with a predetermined measured quantity of form sustaining material supplied to an extrusion nozzle, which includes filling the nozzle to the extreme end thereof, telescoping over the nozzle the open end of one of the containers, starting the flow of material and the extrusion thereof from the end of the nozzle into the container in the form of a bar of form sustaining hardness to progressively fill the container from the open end thereof to the base, stopping the extrusion after a predetermined quantity has been extruded into the container, disposing the container so that its open end and the end of the nozzle are substantially co-planar, removing the container laterally to shear off the bar at the end of the nozzle and at the end of the container substantially on said plane, leaving the nozzle filled to the end and so on with successive containers.

4. In an apparatus for filling large diameter receptacles with form-sustaining semi-fluid compressible material continuously supplied under pressure by small diameter conduit means from a source, a nozzle connected to the conduit means and flaring outwardly to a large diameter at the open end, means adapted to support material therein when filled to the large diameter end thereof, said nozzle adapted to telescopingly receive the open mouth of the receptacle, a stop, operable means engageable with the receptacle base to hold a portion of the receptacle against the stop in the nozzle telescoped direction, means for extruding material into the receptacle including a valve controlling the conduit means and operable to supply material under pressure through the nozzle to the receptacle in the form of a large diameter form-sustaining bar, the valve adapted to be operated to shut off supply of material when the receptacle is completely filled and under pressure from the source, the operable means being then disengageable from the receptacle base to cause the compressed pressure-filled contents of the receptacle to expand and move the receptacle until the receptacle is untelescoped from the nozzle, and a plurality of transversely extending support members, the receptacle being supported on said transversely extending members so that it may then be moved laterally to shear off the bar on the end of the nozzle and on the end of the receptacle leaving the nozzle filled to the end.

5. In a mechanism for filling open mouth cans with ice cream supplied in form sustaining hardness and under pressure from a continuous ice cream freezer, a support adapted to support horizontally a pair of cans, conduit means for conducting ice cream from the freezer, a pair of horizontally disposed nozzles one aligned with each can, a valve for directing the ice cream to one or the other of the nozzles, the nozzles each diverging outwardly to a large diameter at the open end over which the can may be telescoped, a stop on the nozzle against which the open end of the can may abut, an operable mechanism for exert-

ing force on the can to force its open end against the stop, the nozzle being adapted to be initially filled to its end with form-sustaining ice cream so that when the valve is operated an ice cream bar of the diameter of the nozzle end will be extruded into the can to substantially fill it and finally to create excess pressure therein, the operable mechanism being then operable to release the can to cause the ice cream under excess pressure to expand and retract the can and untelescope it from the nozzle, the supports being constructed so that the can may then be moved laterally to shear off the ice cream bar at the end of the nozzle and at the end of the can leaving the nozzle again filled to its open end.

6. In a mechanism for filling large diameter cans with ice cream supplied in form sustaining hardness and under pressure from a continuous ice cream freezer, a support adapted to support horizontally and substantially parallel a pair of cans, conduit means for conducting ice cream from the freezer, a pair of horizontally disposed nozzles one aligned with each can and diverging outwardly from a small diameter at its juncture with the conduit means to a large diameter at the open end, the diameter at the open end adapted to be telescoped into the can, a valve for directing the ice cream to one or the other of the nozzles, a stop on the nozzle against which the open end of the telescoped can may abut, an operable mechanism for exerting force at the rear end of the can to force its open end against the stop, the nozzle adapted to be initially filled to its end with form sustaining ice cream so that when the valve is operated an ice cream bar of the diameter of the nozzle end will be extruded into the can and when the can is substantially filled will cause excess pressure therein, the operable mechanism being then operable to release the can to cause the ice cream under excess pressure to expand and retract the can and untelescope it from the nozzle, the supports being constructed so that the can may be moved laterally to shear off the ice cream bar at the end of the nozzle and at the end of the can leaving the nozzle filled to its end.

7. The method of filling an open-mouth container with a measured quantity of form-sustaining material through a nozzle, which includes telescoping the container over the nozzle and disposing the mouth thereof closely adjacent the end of the nozzle, starting the extrusion of the material from the nozzle in a form sustaining bar having substantially the cross sectional area of the container, progressively forcing the bar into the container from the open end thereof towards the container base while providing a passage for the escape of trapped air, stopping the extrusion when a predetermined quantity has been extruded, effecting relative longitudinal movement between the container and the nozzle simultaneous with progressively forcing the bar into the container to effect disengagement therebetween, and moving the container laterally to cause its mouth to shear off the bar at the nozzle end and causing the nozzle to shear off the bar at the container mouth, leaving the nozzle filled to its end.

8. In an apparatus for filling receptacles with form-sustaining semi-fluid material supplied by conduit means from a supply source, a nozzle connected to the conduit means having an enlarged tubular head adapted to be filled with the semi-fluid, the nozzle head being adapted to have a receptacle telescoped thereover, stop means on

the head for limiting telescoping movement between the receptacle and head, a valve controlling the conduit means and operable to supply material through the nozzle to the receptacle as a
5 form-sustaining bar substantially equal in cross sectional area to the receptacle, the valve being adapted to shut off supply of material when the receptacle has received a measured quantity of bar, means engaging the receptacle base main-

taining the receptacle against the stop-means, said means being movable to permit dis-engagement of the receptacle with the nozzle head, and support members for the receptacle extending transversely of the receptacle, adapted to guide lateral movement of the receptacle to cause the
5 bar to be sheared off at the head of the nozzle and at the open end of the container.

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