

[54] ICECREAM DISPENSER

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[51] Int. Cl.G01f 11/06

[58] Field of Search222/309, 518

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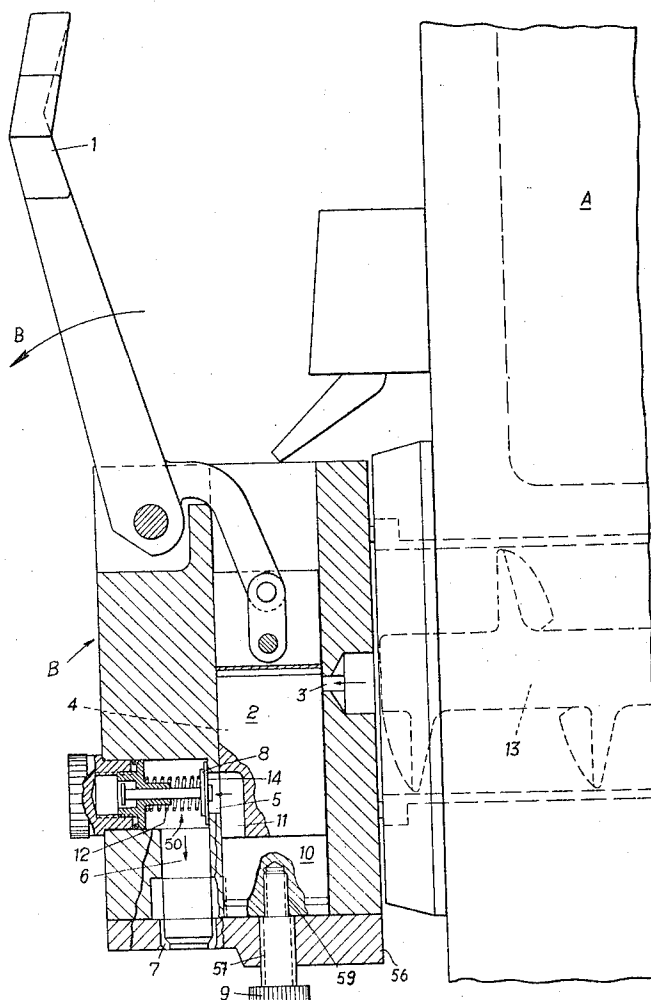
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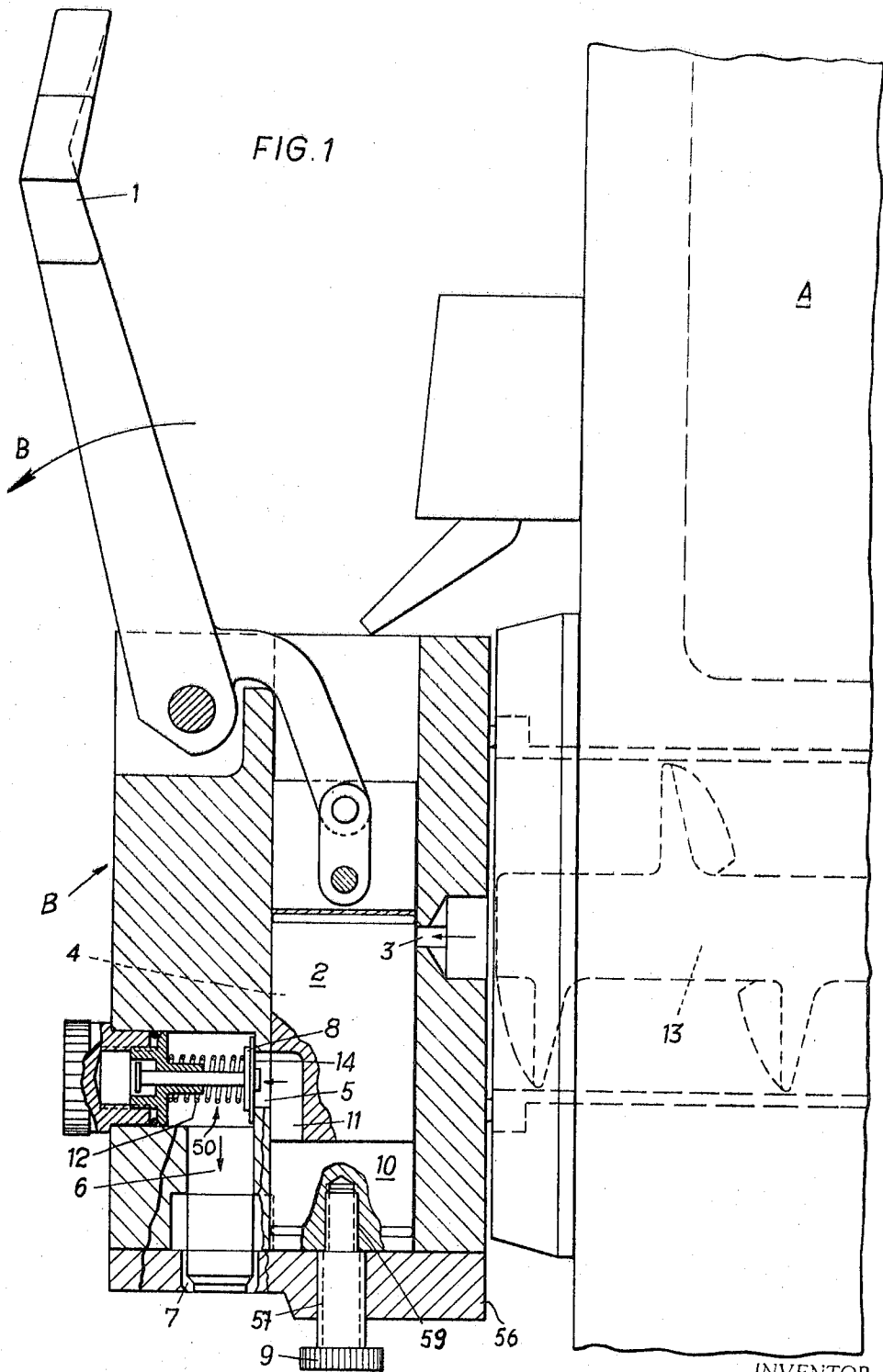
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[57] ABSTRACT

A housing is formed with a cylinder and with an inlet opening communicating with said cylinder. A stationary wall extends across the cross-section of said cylinder and is spaced from said inlet opening in the axial direction of said cylinder. The housing and wall are formed with an inlet opening which communicates with said cylinder and is spaced from said inlet opening in the axial direction of said cylinder on the same side of said inlet opening as said wall. A discharge piston is slidably mounted in said cylinder for movement between first and second limiting positions and arranged to define with said stationary wall a metering chamber which communicates with said inlet and outlet openings when said piston is in said first limiting position and to engage said stationary wall and close said inlet opening when said piston is in said second limiting position. A valve is arranged to control said outlet opening, closing it when the piston is withdrawn to unblock the inlet opening.

16 Claims, 13 Drawing Figures

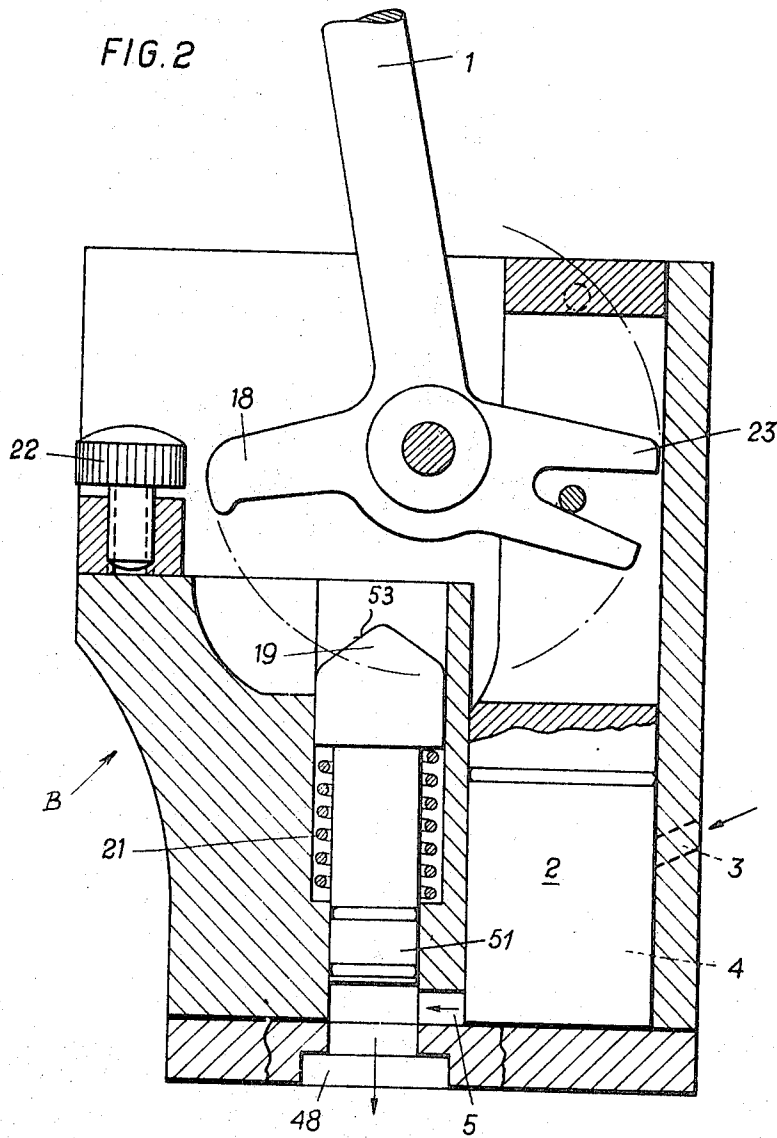




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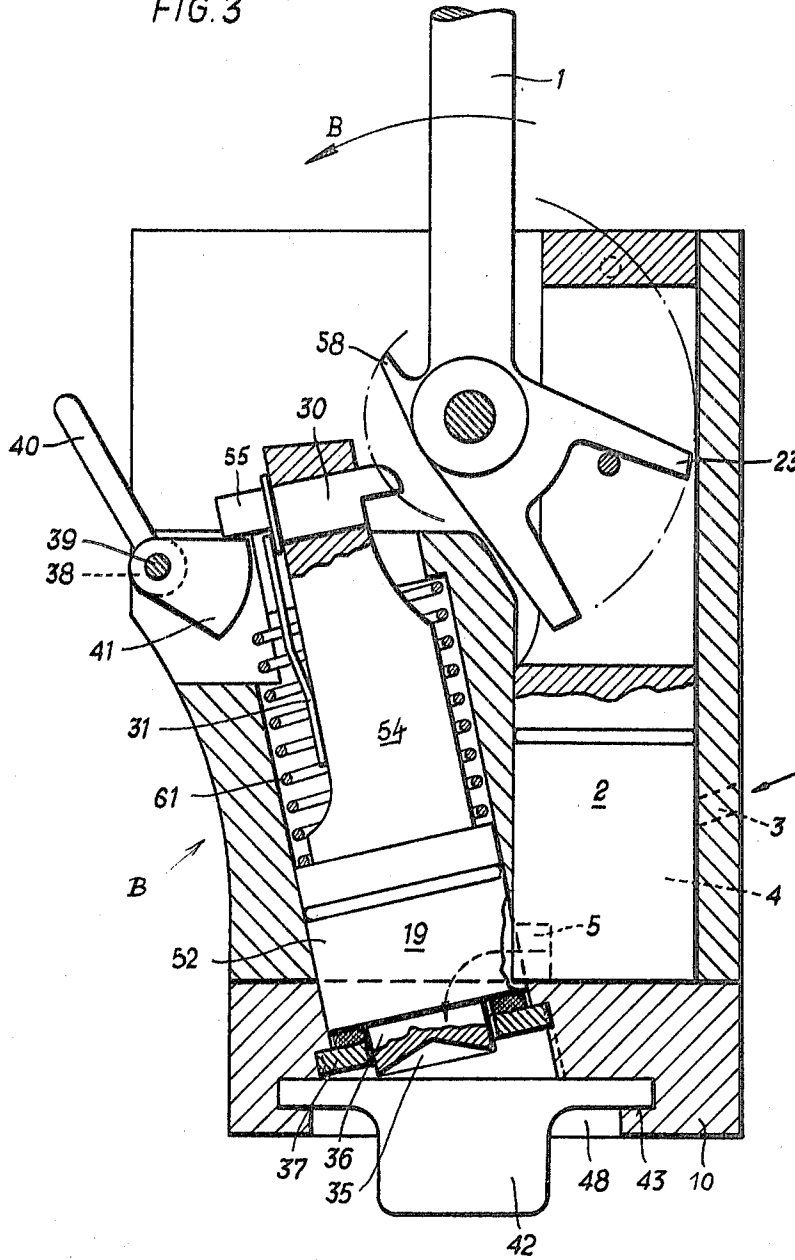


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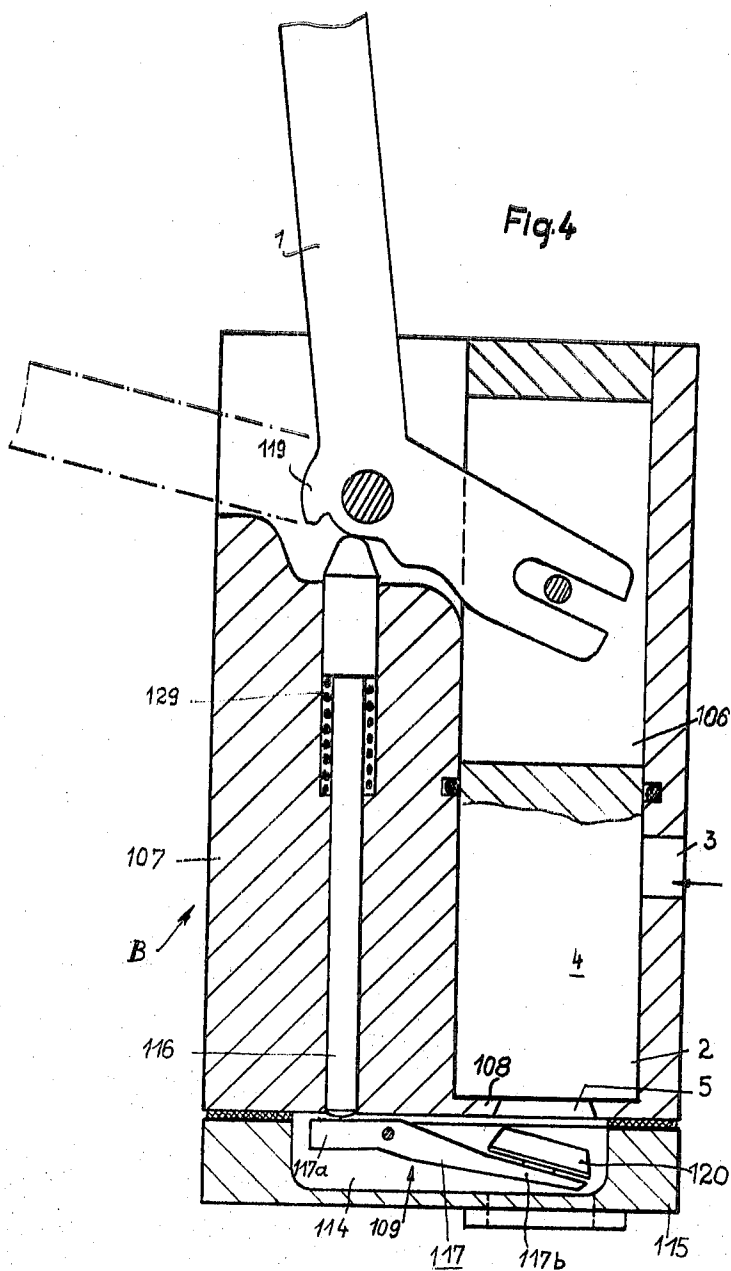
FIG. 3



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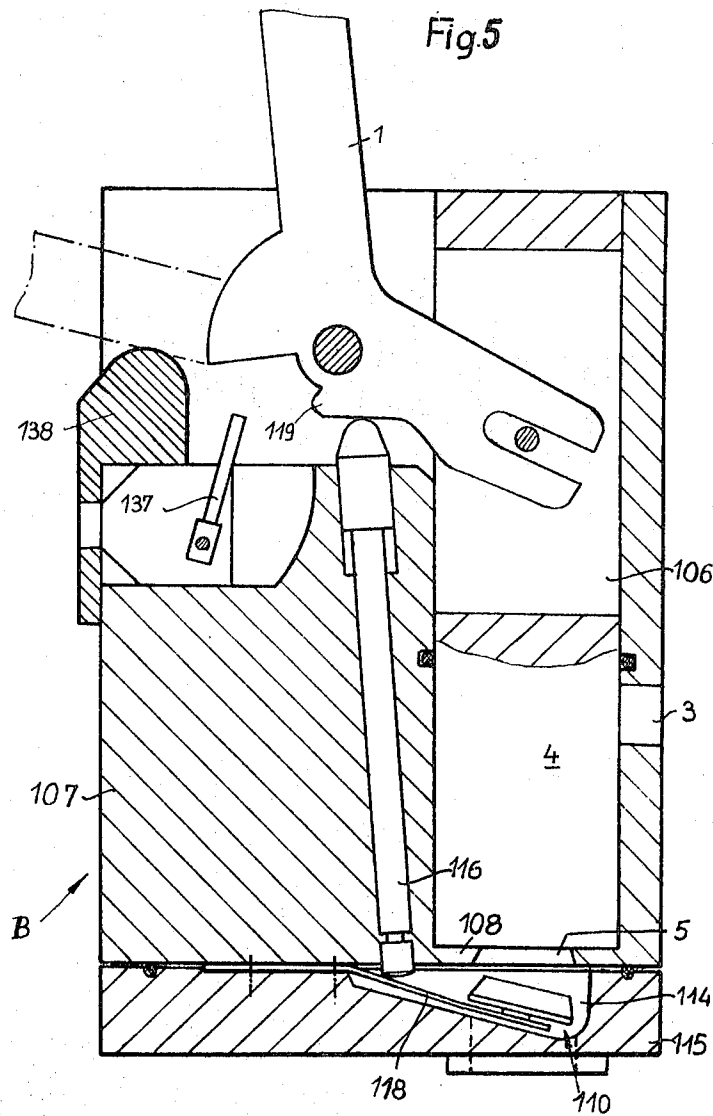
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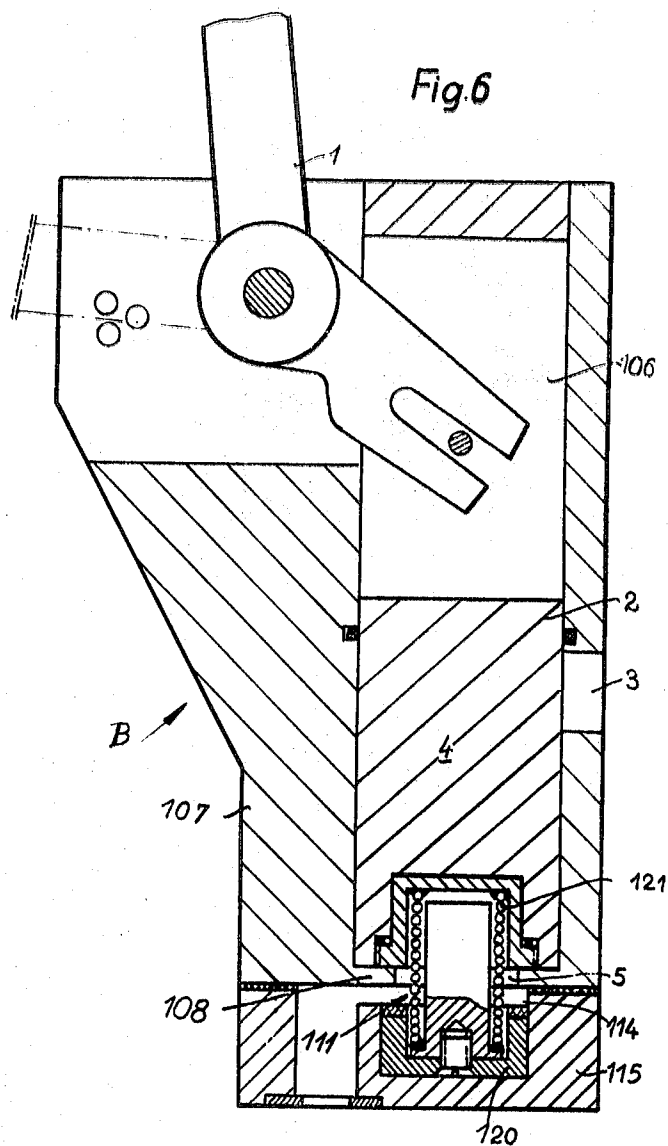
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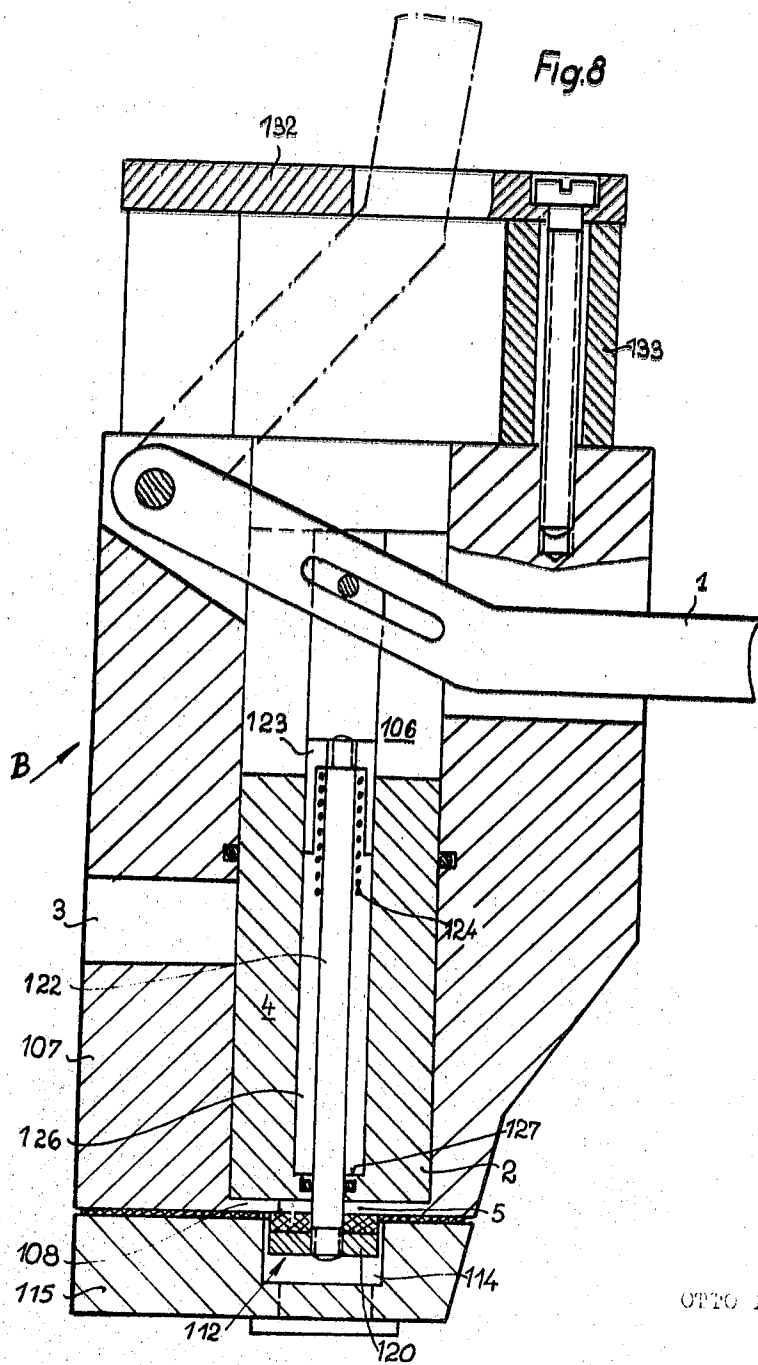
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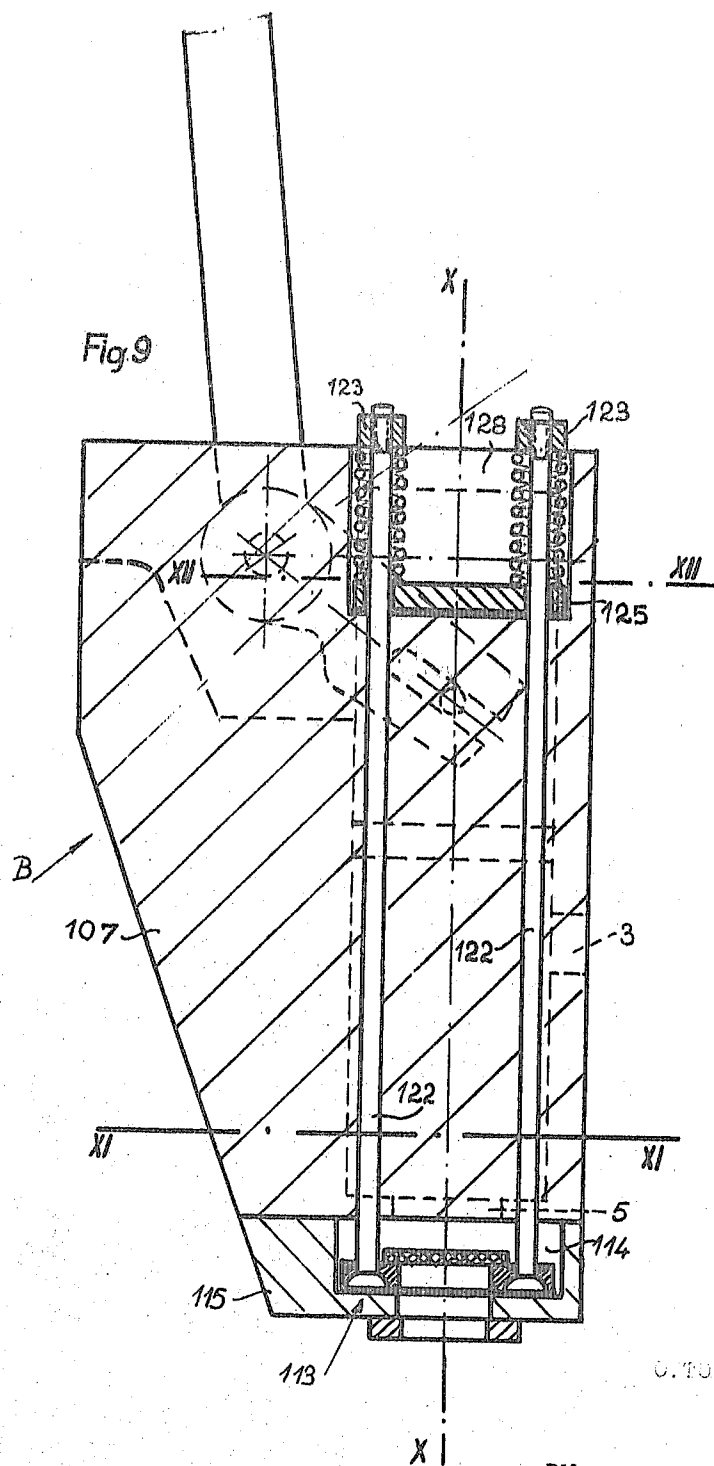
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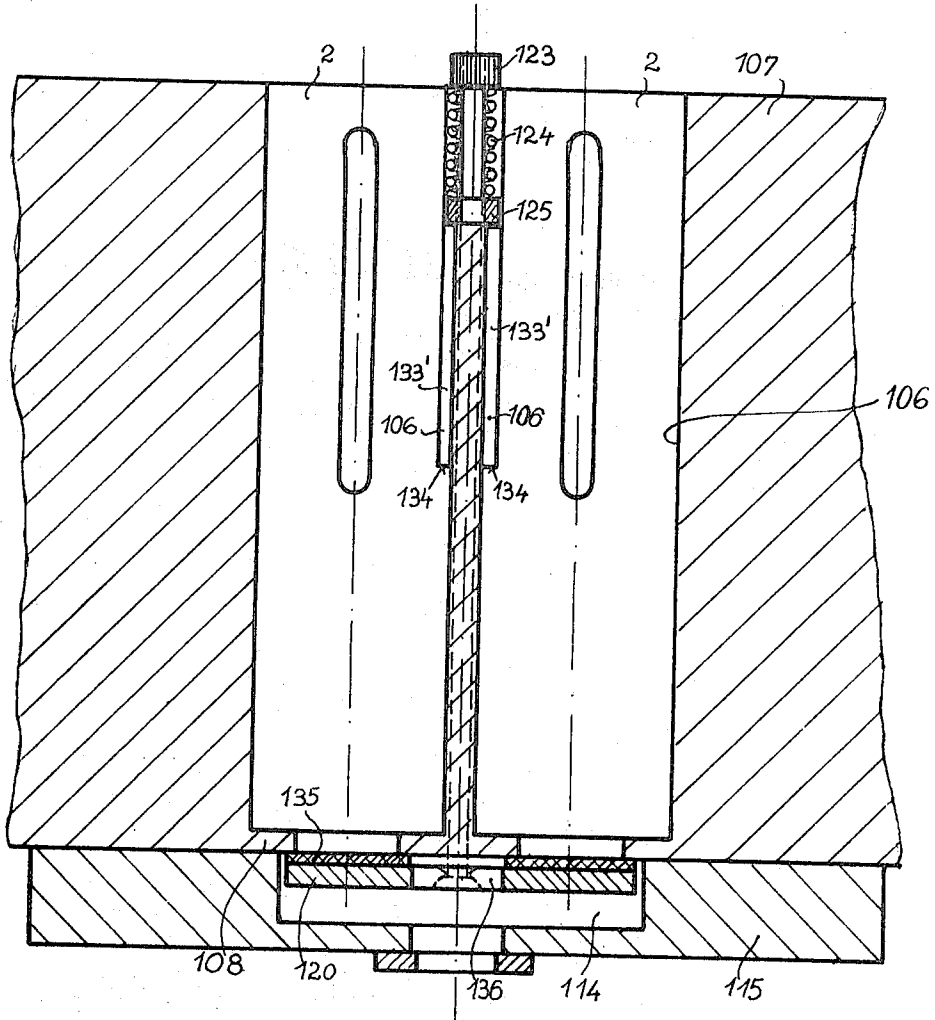
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Fig 10



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Fig. 11

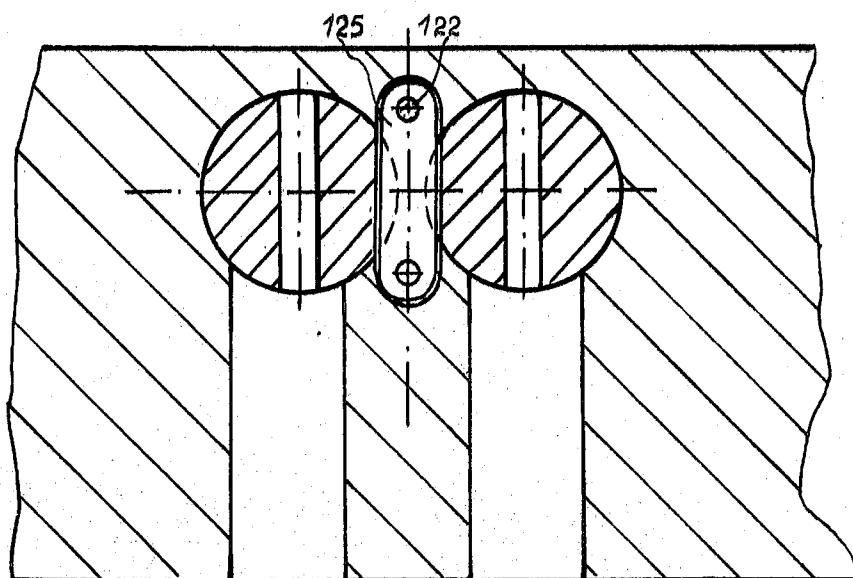
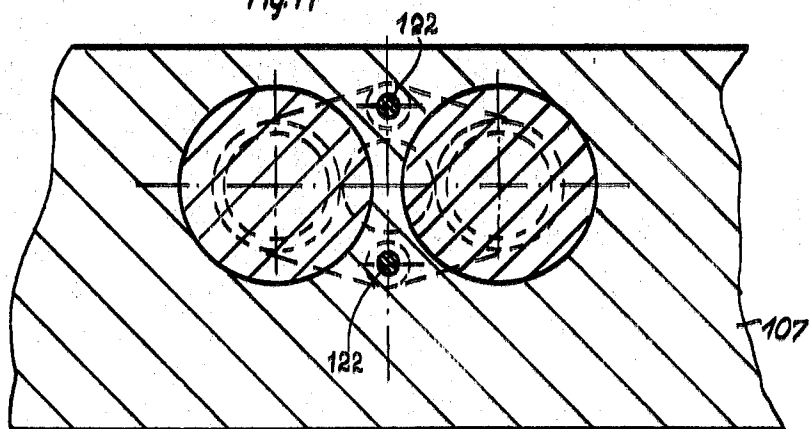


Fig. 12

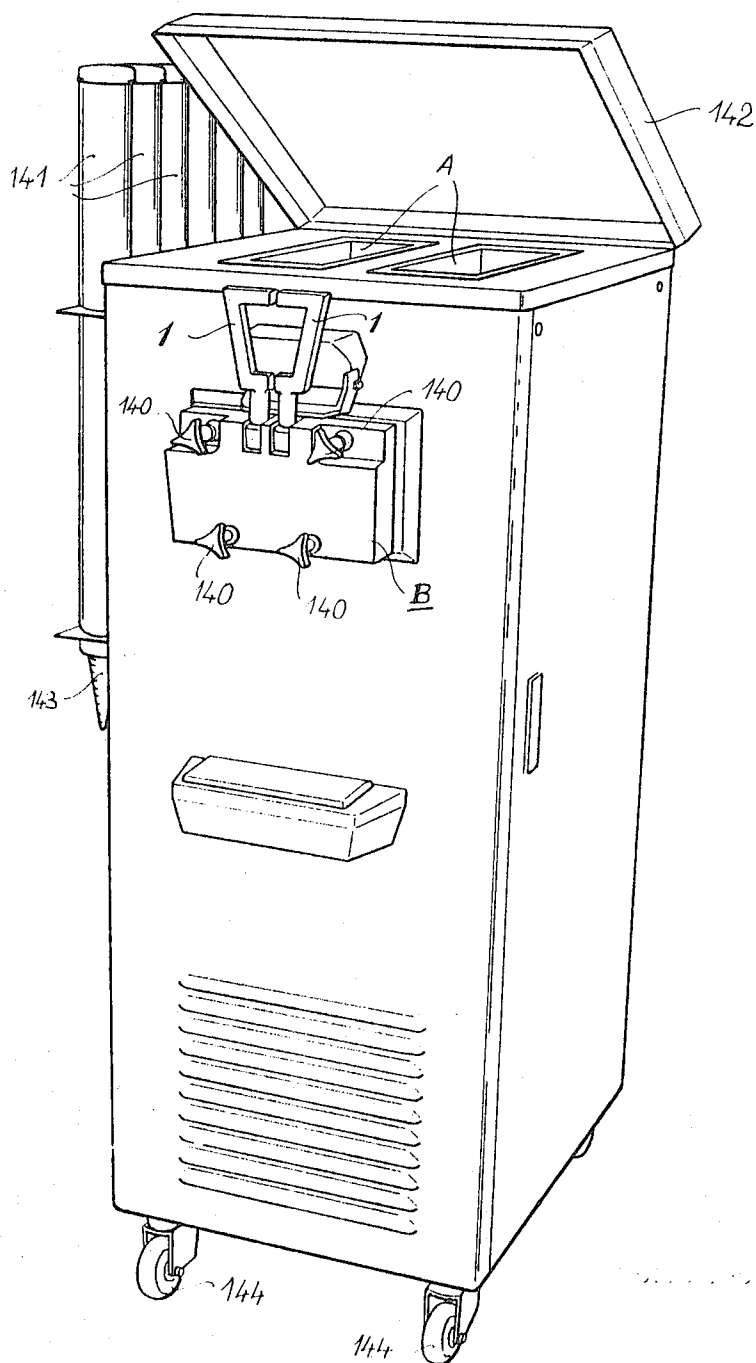
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FIG. 13



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ICECREAM DISPENSER

This invention relates to an icecream dispenser which comprises a cylinder in a housing provided with inlet and outlet openings or parts for the icecream to be dispensed, and which includes a metering chamber between a discharge piston, controlling the charging of the icecream, and a wall which extends across the cross-section of the cylinder, the discharge piston being guided in the cylinder so as to be slidable into engagement with said wall. In known dispensers of that kind, the wall against which the discharge piston is slidable in the cylinder is in frictional contact with the piston and is carried along by the piston as the latter is raised. To enable the head of the discharge piston and the wall to be spaced apart by such a distance as is required for metering the icecream, stops are provided to hold the wall spaced from the bottom dead center of the discharge piston. In one of the known dispensers which have been mentioned above, these stops are formed in the cylinder in which the discharge piston is slidably mounted. In another known dispenser the stop for holding the wall in position is formed on an anchoring pin which extends through the piston and is screwed into a cap threaded onto the cylinder body. In a metering dispenser of the kind just described, the actual metering chamber is filled and the entire portion which is disposed between the wall and the piston head is displaced within the cylinder in the axial direction thereof. This operation requires a structure which can be manufactured only with great difficulties and at high cost because it is not sufficient to provide a piston but one must also provide within the piston a means for guiding the wall. Besides, the stops for holding the wall in position must be very exactly adjusted to prevent the wall from sliding over the lower edge of the inlet to the cylinder. In the latter case, icecream could directly reach the outlet opening rather than enter the metering chamber. The known metering dispenser also requires double fits to ensure a sealed guidance of the wall in the cylinder and a guidance of the wall-carrying pin in the piston. If the wall is canted as it is moved along the cylinder, part of the portion of icecream may be forced back through the inlet opening so that the portion which is being dispensed is smaller than desired. These disadvantages of the known metering dispensers may be avoided according to the invention in that the wall which defines the metering chamber is stationary and the outlet opening from the cylinder is controlled by a valve. In the dispenser according to the invention, the metering chamber can be exactly defined between a stationary wall and the piston head and icecream can be moved through the outlet opening immediately after the movement of the piston has been reversed and without previously displacing the entire portion in the direction of the axis of the piston. The incorporation of a counter which indicates the total number of the portions which have been dispensed enables the owner of a shop to make an exact check on how many portions of icecream have been sold and that the icecream portions which have been sold are of the prescribed size so that he can supervise his employees.

If the icecream is discharged from an opening in the shell of the cylinder, the icecream must be deflected through 90° from the direction of movement of the discharge piston. In an embodiment in which the stationary wall is moved to and held at different levels, it may be necessary to reverse the flow of icecream by 180° for a discharge of the portion so that the icecream enters the outlet opening which is formed in the shell of the cylinder and spaced from the wall. This operation may involve difficulties in large machines. These difficulties can be avoided by another feature of the invention which resides in that the outlet opening consists of an aperture of the stationary wall which defines the metering chamber and the valve is movably mounted outside the cylinder housing in a recess formed in a plate which is secured to the cylinder housing. In such an icecream dispenser, it is ensured that the icecream flows through the outlet opening substantially in the direction of the movement of the piston. The valve is easily accessible because it is arranged outside the cylinder in a recess formed in a plate which is secured to the cylinder housing.

The invention will now be explained more in detail with reference to embodiments shown by way of example in the accompanying drawing in which:

FIGS. 1 to 9 are longitudinal sectional views showing respective embodiments of the invention;

FIG. 10 is a sectional view taken on line X—X in FIG. 9;

FIG. 11 is a sectional view taken on line XI—XI in FIG. 9;

FIG. 12 is a sectional view taken on line XII—XII in FIG. 9; and

FIG. 13 is a perspective view showing an automatic icecream dispenser which is provided with a metering device according to the invention.

In FIG. 1, an automatic icecream-producing unit A of the type described first hereinbefore is diagrammatically shown. The dispenser according to the invention is directly connected to said unit, which does not form part of the invention.

The icecream is metered as follows: The lever 1 is pulled down in the direction of the arrow B to pull up the discharge piston 2, thus withdrawing it from its ejection position proximal to an end wall 10 of metering chamber 4 into a loading position remote from that wall to unblock an entrance port 3 for icecream under pressure of a feed screw 13. When the piston 2 has reached its top dead center, the preferably slot-shaped inlet opening 3 is exposed so that the icecream enters the metering chamber 4 both under the action of the vacuum which has been produced and under the pressure of the agitating screw 13. When the lever 1 is forced upwardly, the discharge piston 2 is depressed and immediately closes the inlet opening 3 and forces the icecream from the metering chamber 4 through the outlet opening 5 and the bore 6 and the extrusion nozzle 7 into the cup or cornet wafer for icecream. This cup or cornet wafer is held in position under the nozzle 7. The outlet opening or exit port 5 is normally closed by a valve 50, which has a pressure plate 14 provided with a pad 8 of elastic material, preferably rubber, and which is urged to a closed position by a spring 12. When the icecream portion is to be discharged, the icecream forces back the pressure plate 14 to enter the bore 6.

The quantity of a portion is controlled by an adjusting screw 9, which consists preferably of a knurled or milled screw. When this screw is operated to impart an upward movement to wall 10 which defines the metering chamber 4, the stroke of the piston 2 and the volume of the metering chamber 4 will be reduced.

An axially extending peripheral groove 11 provided in the discharge piston 2 adjacent to the outlet opening 5 ensures a discharge of the icecream regardless of what lower limiting position has been selected for the discharge piston and what position has been selected for the wall 10 to control the quantity of the portion. It will be noted that groove 11 terminates at a face of piston 2 confronting the displaceable end wall 10.

The adjusting or setting screw 9 has two different external screw threads 57, 59, which are independent of each other. The first external screw thread 59 is in mating engagement with the stationary wall 10. The second external screw thread 57 is in mating engagement with a tapped bore formed in the retaining member 56, which is secured to the cylinder. When the adjusting screw 9 is turned through one revolution, the wall 10 is moved upwardly by the combined pitch of the two external screw threads 57, 59 and thereafter remains in its adjusted position during operation.

Because the upward movement of the lever 1 required to lower the discharge piston 2 effects the discharge of the icecream, a larger force is required for this operation than for raising the discharge piston 2. For this reason, springs may be provided, which are stressed as the discharge piston 2 is raised. The force of these springs assists the discharge of the icecream portion so that this operation is facilitated. In this way, the difference between the forces required to raise and lower the discharge piston 2 is reduced.

In the embodiment shown in FIG. 2, just as in the embodiment described before, the lever 1 must be lowered to raise the discharge piston 2, which exposes the inlet opening 3 when the piston has reached its top limiting position. The discharge

piston 2 is operatively connected to the lever 1, e.g., by means of a fork 23, an eccentric member, a linkage or the like. Before the inlet opening 3 is exposed, an actuating or camming extension 18 provided at the pivoted lever 1 forces down the valve stem 19 of the valve 51 to close the outlet opening 5. The metering chamber 4 is now filled with icecream. During the movement of the valve stem 19, the actuating extension 18 of the lever 1 slides along a ramp 53, which is formed on the valve stem 19 and inclined to the direction of movement of the actuating extension 18.

To discharge the icecream portion, the lever 1 is raised, the actuating extension 18 releases the valve stem 19 and the spring 21 forces the valve stem 19 upwardly so that the outlet opening 5 is opened. The discharge piston 2 is depressed at the same time to close the inlet opening 3 and thereafter to discharge the icecream portion completely.

The quantity of the icecream portion is adjusted by an adjusting screw 22, which consists preferably of a knurled or milled screw and limits the downward movement of the lever 1 to control the upper limiting position of the discharge piston 2 and the volume of the metering chamber 4.

In the embodiment shown in FIG. 3, the lever 1 is also lowered to raise the discharge piston 2 so that the inlet opening 3 leading into the metering chamber 4 is exposed. When the lever 1 is lowered, a lug or extension 58 formed on the lever 1 and used to actuate the valve 52 depresses an actuating member 30, which is mounted in the valve stem 54 and movable transversely to the axis of the stem. When the actuating extension 58 has moved past the actuating member 30, the latter is forced back by a spring 31 into the path of the actuating extension 58. When the lever 1 is then raised to discharge the icecream portion, the actuating extension 58 cooperates with the actuating member 30 to raise the valve stem 19. When the latter causes the outlet opening 5 to be exposed, the discharge piston 2 closes the inlet opening 3 and subsequently discharges the icecream portion. When the lever 1 has been completely returned, the actuating extension 58 releases the actuating member 30 so that the return spring 61 returns the valve stem 19, which in this operation discharges the residual icecream which has been left near the outlet opening 5. A funnel-shaped recess 35 at the end of the valve stem 19 and an extension 36 which is provided on the stem 19 and extends through the extrusion nozzle 37 ensure that the residual icecream will be completely discharged and the icecream on the cornet wafer will be reliably separated from the nozzle.

The valve 52 can be locked in its uppermost position by a rocker lever 40, 41, which is engageable with an extension 55 which is provided on the valve stem 54 and protrudes from the actuating member 30. Selective operation of the detent 40, 41 enables an unmetered discharge of icecream.

A stop sleeve 38 is detachably mounted on the pivot 39 for the rocker lever 40, 41 and is engageable by the lever 1 as it is lowered. When the stop sleeve 38 is replaced by one which is larger in diameter, the movement of the lever 1 will be limited earlier, the discharge piston 2 will be raised only to a lower level and the quantity of the icecream portion which is discharged will be reduced.

The icecream outlet opening 48 which is formed in the wall 10 can be closed by means of a gate 42, which can be displaced in a T-shaped groove 43 of the wall 10.

In all Figures of the drawing, arrows indicate the flow path of the icecream from the inlet opening 3 or 48 to the icecream outlet opening 7.

In automatic icecream dispensers for a plurality of kinds of icecream, e.g., two kinds thereof, a separate discharge piston 2 is provided for each kind of icecream. For this reason, the operation of each discharge piston 2 will result in a discharge of one portion of one kind of icecream. When both discharge pistons 2 are operated at the same time, two portions consisting of equal quantities of respective kinds of icecream are discharged at the same time.

The apparatus according to the invention shown in FIGS. 4 - 12 comprises a housing 107 which contains at least one

cylinder 106 with an inlet opening 3 and at least one outlet opening 5 for the icecream. A metering chamber 4 is formed in the cylinder 106 between a discharge piston 2, which controls the inlet 3, and a wall 108, which extends across the cross-section of the cylinder 106. The discharge piston 2 is slidably guided in the cylinder 106 to move relative to the wall 108, which is stationary. The outlet opening 5 of the cylinder is controlled by a valve. Various embodiments of such valve are shown in this and subsequent Figures. In all embodiments, the outlet opening 5 of the cylinder 106 consists of an aperture in the stationary wall 108 which defines the metering chamber 4. The valve 109, 110, 111, 112 or 113 is movably mounted outside the cylinder housing 107 in a recess 114 of a plate 115, which is secured to the cylinder housing 107.

In the embodiments shown in FIGS. 4 and 5, the valve 109 or 110 consists of a flap valve operable by a resilient coupling including a pin 116, which is slidably mounted in the housing 107 of the cylinder 106 and at one end engages the pivoted arm 117a or 118 of the flap valve while its other end engages a cam portion 119 of an operating lever 1, which is pivoted in the housing 107 of the cylinder 106 and serves to reciprocate the discharge piston 2 in the cylinder 106. As is apparent from FIG. 4, the actuating member 117 of the flap valve 109 forms a two-armed lever. The valve member 120 of the valve is secured to the second lever arm 117b. The actuating pin 116 for the flap valve 117 in the embodiment shown in FIG. 4 is biased by a spring 129 tending to move the pin 116 away from the lever arm 117a of the actuating member 117 of the flap valve 109. When in the embodiment shown in FIG. 4 the operating lever 1 is strung clockwise as viewed in FIG. 4, the piston 2 is raised and the pin 116 is lowered against the pressure of the spring 129 so that the lever arm 117a of the actuating member 117 of the flap valve 109 is pivotally moved in a counterclockwise sense as viewed in FIG. 4 and the outlet opening 5 of the cylinder 106 is closed before the discharge piston 2 opens the inlet opening 3 for the icecream. The inlet opening 3 for the icecream is not opened until the valve member 120 of the flap valve 109 has closed the outlet opening 5 of the cylinder 106. In the embodiment shown in FIG. 5 the actuating member 118 of the flap valve 110 consists of a leaf spring having one end secured to the plate 115, which is again formed with the recess 114 accommodating the valve 110, whereas the other end of the spring carries the valve member of the valve 110. The leaf spring 118 forming the actuating member of the flap valve 110 tends to hold the valve member thereof in the outlet opening 5 of the cylinder 106. In this case, a pivotal movement of the operating lever 1 in the clockwise sense as viewed in FIG. 5 causes the discharge piston 2 to descend and the pin 116 to apply pressure to the leaf spring 118 so that the outlet opening 5 from the cylinder 106 is opened.

In the embodiment of the icecream dispenser shown in FIG. 6, the outlet opening 5 of the cylinder 106 is adapted to be closed by a valve member 120 of a valve 111. One end of a coil spring 121 is secured to the valve member 120. The other end of the coil spring 121 is secured to the discharge piston 2. In this embodiment, the valve member 120 is lifted by the spring 121 and elastically forced against the rim of the outlet opening 5 to close the same as the piston 2 is raised. FIG. 6 shows the parts in a position in which the spring is fully compressed. As the piston is raised, the spring gradually expands. The spring entrains the valve member 120 as the upward movement of the piston is continued. It is understood that the outlet opening 5 is closed before the lower edge of the discharge piston 2 moves past the lower edge of the inlet opening 3. On its end face contacting the rim of the opening 5, the valve member 120 has a pad of elastic material, preferably in the form of a rubber ring.

In the embodiments shown in FIGS. 7 to 12, the valve member 120 of the valve 112 or 113 is secured to at least one stem and preferably to two stems 122, such as those shown in FIGS. 9 to 12. An abutment 123 for a spring 24 is secured to each stem at the end thereof which is remote from the valve

member 120. The spring abutment 123 may be threadedly engaged with the stem 122 to define different positions for the end of the spring 124. The second end of the spring is engageable with the discharge piston 2 before the latter opens the inlet opening 3 through which the icecream to be dispensed enters the cylinder. In the embodiment shown in FIGS. 9 to 12, the second end of the spring bears on the discharge piston 2 with a backing plate 125 interposed. In the embodiments shown in FIGS. 7 and 8, the stem 122 connected to the valve member 120 extends through the piston head of the discharge piston 2 and into an oversize bore 126, which extends axially of the discharge piston 2. That end of the spring 124 which is remote from the abutment 123 secured to the end of the stem 122 is engageable with the bottom 127 of the bore 126 in the discharge piston 2. The length of the spring 124 when expanded may be smaller than the length of the bore 126 so that valve 112 is normally open. In this embodiment too, the valve member 120 is provided with a resilient pad to ensure that the outlet opening 5 of the cylinder 106 can be sealed. When the piston 2 has been raised to a predetermined extent from its bottom limiting position, the bottom 127 of the bore 126 engages that end of the spring 124 which faces the valve member 120. The second end of the spring 124 bears on the adjustable abutment 123. The valve member 120 is now moved in unison with the piston and engages the rim of the outlet opening 5. As the upward movement of the piston 2 is continued, the spring 124 is compressed and the valve member 120 is forced tightly against the outlet opening 5 so that the latter is held closed while icecream enters the cylinder 106 through the inlet opening 3. In the embodiment shown in FIG. 7, the pivot for the operating lever 1 is arranged so that the icecream is discharged by an upward movement of the operating lever 1 from a generally horizontal position to a vertical position.

In the embodiment shown in FIG. 8, the icecream is discharged when the operating lever 1 is moved from a generally vertical position (dot-dash lines), to a generally horizontal position (full lines). This is accomplished in the embodiment shown in FIG. 8 in that the pivot for the operating lever is mounted in the housing 107 on that side of the discharge piston 2 which is remote from the operator.

In the embodiment shown in FIG. 7, the quantity of the portion can be selected by a change of the stroke of the discharge piston 2. For this purpose, a plug pin 131 is engageable by the operating lever 1 as it moves from a vertical position toward a horizontal position. The plug pin 131 may be inserted into various bores 130 which are formed in the housing 107 in the range of the pivotal movement of the operating lever 1.

If the spring 124 in the embodiments shown in FIGS. 7 and 8 is so long that it engages the abutment 123 and the bottom 127 of the bore 126 when the piston 2 is at its bottom limiting position, the valve member 120 also blocks the outlet opening 5 in that piston position under the pressure exerted by the spring 124 on the stem 122. In this case, the valve member is moved away from the outlet opening 5 by the pressure which is exerted on the valve member 120 by the descending piston through the intermediary of the icecream. This arrangement of the spring has the advantage that the raising of the piston 2 produces in the cylinder 106 a subatmospheric pressure, which assists the inflow of the icecream through the inlet openings 3.

In the embodiment shown by way of example in FIG. 8, the stroke of the discharge piston 2 is limited in that the operating lever 1 engages a stop plate 132 during its movement from a generally horizontal position to a generally vertical position. The distance from the stop plate 132 to the pivot for the operating lever 1 is determined by a detachable sleeve 133. When the sleeve 133 in the embodiment shown in FIG. 8 is replaced by a shorter sleeve, the stop plate 132 will be moved nearer to the pivot of the operating lever 1 so that the stroke of the discharge piston 2 and the quantity of the portion to be dispensed are reduced.

In the embodiment shown by way of example in FIGS. 9 to 12, the backing plate 125 is mounted in a recess 128 formed in

the housing 107 of the cylinder 106 and the periphery of the plate 125 extends into the path of two spaced-apart, parallel discharge pistons 2 which are disposed in the cylinder housing 107. In this embodiment, the two cylinders can be supplied with different kinds of icecream at the same time or each piston can be operated independently of the other.

In the embodiment shown in FIGS. 9 to 12, each piston has a milled recess 133' which is connected by a step 134 to the cylindrical skirt of the piston. As the discharge piston 2 is raised, the step 134 engages the backing plate 125 and entrains it together with the stem 122 and the valve member 120 upwardly so that the latter is moved toward the outlet opening 5 of the cylinder 106. That portion of the valve member 120 which is disposed below the outlet opening 5 is provided with sealing discs 135 of elastic material, preferably rubber. To facilitate the discharge of the icecream, the valve member 120 is formed with a central bore 136. The presence of the springs 124 enables the use of a given dispenser to discharge icecream portions differing in quantity because the lost-motion connection between the piston and the spring-loaded plate 125 ensures that the outlet opening 5 will always be closed at the time when the inlet opening 3 is exposed by the lower edge of the rising piston 2 regardless of the terminal position of the piston.

In the embodiment shown in FIG. 5, a lever 137 is provided which serves to operate a counter. The lever 137 is pivoted in the housing 107 of the cylinder 106 and is operated by the cam portion 119 of the operating lever 1. The movement of the lever 1 from an approximately vertical position to an approximately horizontal position may be limited by a stop 138, which extends into the path of the lever 1. Different stops 138 may be inserted to stop the lever 1 in different positions and to limit the upstroke of the piston 2 accordingly.

FIG. 13 shows in a perspective view an automatic icecream dispenser which is provided with the metering device B according to my invention illustrated in various modifications in FIGS. 1 to 12. Fastening of the device B on the icecream dispenser is accomplished by means of screws 140. Containers A are provided for receiving the ice mix to be introduced into the dispensing device B by means of the screw 13 (FIG. 1) via aperture 3. Owing to the presence of two containers A, two different kinds of icecreams can be dispensed by actuating either of the levers 1 of the icecream dispenser shown in FIG. 13. The icecream dispenser is furthermore provided with tubular containers 141 for storing the cornets 143. The icecream dispenser can be moved by means of castor wheels 144.

What is claimed is:

1. An icecream dispenser comprising:
 - a housing forming a metering chamber with rigid walls including a stationary end wall;
 - a piston slidable in said chamber toward and away from said end wall for defining therewith a space of variable volume;
 - inlet means forming an entrance port to said chamber at a location remote from said end wall, said entrance port communicating with a source of icecream under pressure;
 - outlet means forming an exit port from said chamber at a location proximal to said end wall for the discharge of icecream under pressure from said piston, the latter unblocking said entrance port only in a loading position withdrawn from said end wall;
 - operating means for reciprocating said piston between said loading position and an ejection position close to said end wall; and
 - valve means in said outlet means obstructing said exit port in said loading position of said piston, said valve means including a spring-loaded member and being provided with adjustable abutment means for the loading spring thereof.
2. A dispenser as defined in claim 1 wherein said valve means includes a plug in said housing threadedly engaging said abutment means.

3. A dispenser as defined in claim 1, further comprising setting means for shifting the position of said end wall to vary the maximum volume of said space.

4. An icecream dispenser comprising:

a housing forming a metering chamber with rigid walls including a stationary end wall;

a piston slidable in said chamber toward and away from said end wall for defining therewith a space of variable volume;

inlet means forming an entrance port to said chamber at a location remote from said end wall, said entrance port communicating with a source of icecream under pressure;

outlet means forming an exit port from said chamber at a location proximal to said end wall for the discharge of icecream under pressure from said piston, the latter unblocking said entrance port only in a loading position withdrawn from said end wall;

operating means for reciprocating said piston between said loading position and an ejection position close to said end wall;

valve means in said outlet means obstructing said exit port in said loading position of said piston; and setting means for shifting the position of said end wall to vary the maximum volume of said space.

5. A dispenser as defined in claim 4 wherein said setting means comprises a screw rotatably threaded into a part of said housing and in engagement with said end wall.

6. A dispenser as defined in claim 5 wherein said end wall and said part of said housing have a pair of tapped, aligned bores of different pitch in mating engagement with respective thread portions of said screw.

7. A dispenser as defined in claim 4 wherein said exit port opens laterally into said chamber, said piston being provided with an axially extending peripheral groove terminating at a piston face confronting said end wall and registering with said exit port in different limiting ejection positions of said pistons.

8. An icecream dispenser comprising:

a housing forming a metering chamber with rigid walls including a stationary end wall;

a piston slidable in said chamber toward and away from said end wall for defining therewith a space of variable volume;

inlet means forming an entrance port to said chamber at a location remote from said end wall, said entrance port communicating with a source of icecream under pressure;

outlet means forming an exit port from said chamber at a location proximal to said end wall for the discharge of icecream under pressure from said piston, the latter unblocking said entrance port only in a loading position

withdrawn from said end wall;

operating means for reciprocating said piston between said loading position and an ejection position close to said end wall; and

valve means in said outlet means obstructing said exit port in said loading position of said piston, said valve means being provided with actuating means controlled by said operating means for unblocking said exit port in a position in which said piston obstructs said entrance port.

9. A dispenser as defined in claim 8 wherein said operating means comprises a lever.

10. A dispenser as defined in claim 9 wherein said actuating means includes cam means rigid with said lever.

11. A dispenser as defined in claim 9 wherein said actuating means includes a resilient coupling between said valve means and said lever.

12. A dispenser as defined in claim 11 wherein said coupling forms part of a lost-motion connection.

13. A dispenser as defined in claim 8, further comprising detent means selectively operable to disable said valve means by deactivating said actuating means.

14. An icecream dispenser comprising:

a housing forming a metering chamber with rigid walls including a stationary end wall;

a piston slidable in said chamber toward and away from said end wall for defining therewith a space of variable volume;

inlet means forming an entrance port to said chamber at a location remote from said end wall, said entrance port communicating with a source of icecream under pressure;

outlet means forming an exit port from said chamber at a location proximal to said end wall for the discharge of icecream under pressure from said piston, the latter unblocking said entrance port only in a loading position withdrawn from said end wall;

operating means for reciprocating said piston between said loading position and an ejection position close to said end wall;

valve means in said outlet means obstructing said exit port in said loading position of said piston; and

adjustable stop means for arresting the withdrawal of said piston in different loading positions to vary the maximum volume of said space.

15. A dispenser as defined in claim 14 wherein said operating means comprises a swingable lever engageable by said stop means in a terminal position of its swing.

16. A dispenser as defined in claim 14 wherein said valve means comprises a blocking member linked with said piston by a resilient connection.

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