Aug. 1, 1933. E. L. STEWARD 1,920,605

ICE CREAM MIXER

Filed Aug. 13, 1932

Fig. 2.

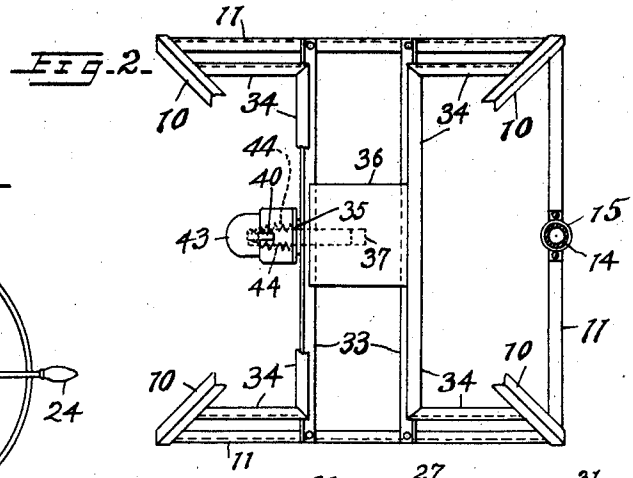


Fig. 3.

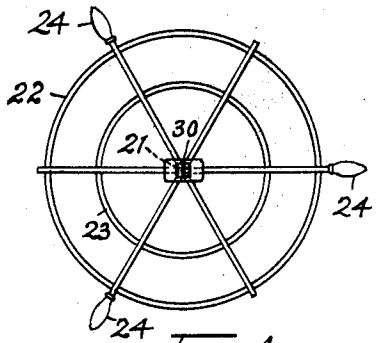
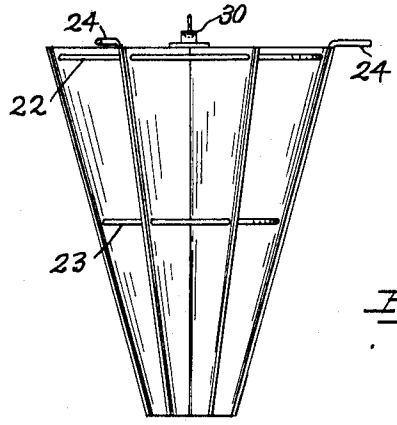


Fig. 4.



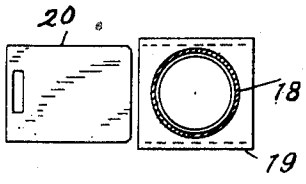
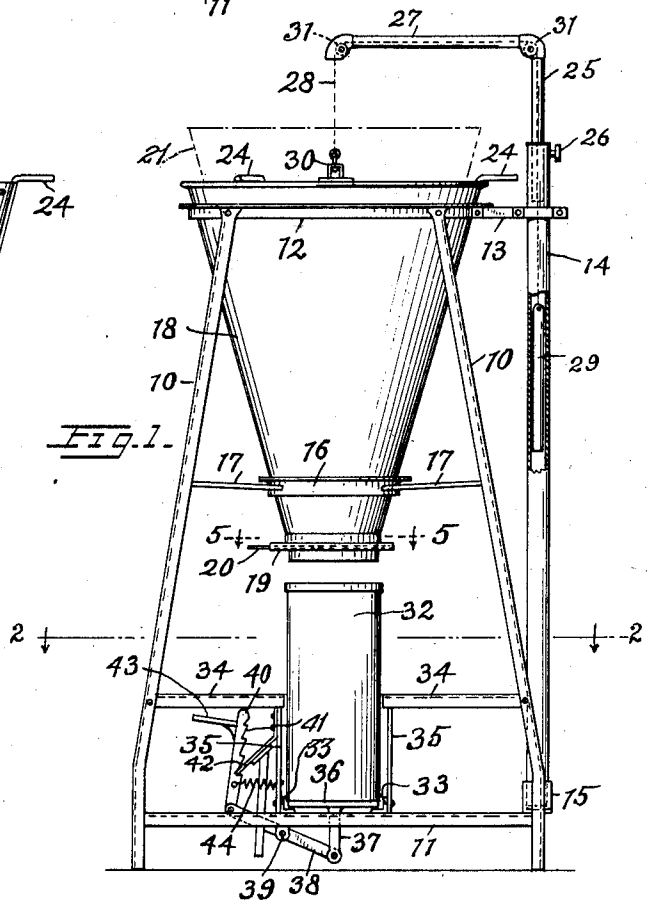


Fig. 5.

Fig. 1.



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ICE CREAM MIXER

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7 Claims. (Cl. 226—100)

This invention relates to apparatus for mixing various kinds and colors of ice cream in the receptacles in which the ice cream is shipped so that when the ice cream is removed from these receptacles it will have a variegated appearance and form what is now commonly known as rainbow ice cream.

It is one of the objects of the invention to provide a comparatively simple apparatus, for the purpose specified, that will be inexpensive to manufacture and convenient and efficient in operation.

Other objects of the invention and the features of novelty will be apparent from the following description, taken in connection with the accompanying drawing, of which

Figure 1 is a side elevation of a machine embodying my invention, certain parts being shown in section.

Fig. 2 is a plan view of the lower part of the machine as seen from the plane 2—2 of Fig. 1.

Fig. 3 is a plan view of the rotatable partition member that is employed in the machine.

Fig. 4 is a side elevation of the partition member, and

Fig. 5 is a plan view of the valve for controlling the discharge of ice cream from the machine, as the same would be seen from the plane 5—5 of Fig. 1.

Referring to the drawing, the machine comprises a skeleton framework which includes four angle-iron uprights 10 which are connected together at the bottom by an angle-iron U-shaped member 11. At their upper ends the uprights or legs 10 are connected by a ring 12, which ring may be made from angle-iron or a flat bar, this ring carrying a rearward extension or bracket 13 in which a pipe 14 is clamped, the lower end of this pipe 14 being seated in a member 15 that is bolted or otherwise secured on the member 11. Below the ring 12 there is a smaller ring 16 that is carried from the legs 10 by means of the rods 17.

A funnel-shaped hopper 18 is supported in the rings 12 and 16, as shown in Fig. 1, and the lower end of this hopper carries a casting 19 in which a slide valve 20 operates to close the lower end of the hopper 18.

Arranged within the hopper 18 is a partition member formed of any suitable number of plates arranged in the form of a star as will be seen from Figs. 3 and 4. These plates are secured together at the center 21 and wire rings 22 and 23 are provided to secure the plates in properly spaced relation. In Figs. 3 and 4 it will be noted that the partition member is so formed as to provide six separate compartments within the hopper 18, when the partition member is positioned therein. Handles 24 are provided on the partition member and project laterally at the top of the hopper as will be seen from Fig. 1, these handles enabling the operator of the machine to rotate the partition member in the hopper for a purpose to be hereinafter described.

A tubular L-shaped bracket is arranged above the hopper 18 with a vertical leg 25 telescoped with the pipe 14 and secured therein, so as to be vertically adjustable, by the screw 26. This bracket has a horizontal leg 27 which projects over the hopper and a cable 28 extends through the bracket and has one end connected with a counterweight 29, in the pipe 14 and the other end connected by a swivel 30 to the center 21 of the partition member in the hopper. Pulleys 31 may be provided for the cable 28 so that it may be freely adjusted to raise and lower the partition member.

A runway is provided at the bottom of the machine for a series of receptacles 32, to be filled from the hopper 18. This runway may consist of a pair of angle-irons 33 and guides 34 which may consist of angle-irons bent into U shape and having their ends attached to the legs 10 and their intermediate portions supported from the angle-irons 33 by upright bars 35. At the middle of the runway there is a platform 36 on which the receptacles 32 are adapted to be separately positioned and raised into engagement with the casting 19. The platform 36 has a downwardly projecting arm 37 which is suitably guided and has its lower end pivotally connected with the lever 38 that is fulcrumed at 39 on a supporting bracket and has attached to its opposite end a treadle member 40. The treadle member 40 has ratchet teeth 41 which cooperate with the detent 42 so that when the treadle member is depressed by the foot of the operator in engagement with the pedal 43, the platform 36 will be elevated and the receptacle 32 moved into engagement with the casting 19. The engagement of the ratchet teeth 41 with the detent 42 will hold the receptacle in the elevated position until the treadle member is released from the detent 42. Springs 44 are provided for yieldingly holding the ratchet teeth 41 in engagement with the detent 42.

In the operation of the machine the partition member will be arranged in the hopper 18 with its lower end just out of contact with the valve 20 and, the latter being closed, the various com-

partments formed by the partition member will be filled by the different kinds or colors of ice cream. One of the receptacles 32, being in position on the platform 36, the treadle member 40 will be depressed to bring the receptacle 32 up against the casting 19. The ice cream should be frozen only to a consistency that will permit it to flow freely so that when the valve 20 is opened, the ice cream will flow downwardly from the various compartments in the hopper 18 into the receptacle 32. While the ice cream is flowing into the receptacle 32 the operator rotates the partition member, by means of the handles 24 and, as a result, the various kinds and colors of ice cream are deposited in the receptacle 32 in spirally arranged layers, so that when it is dipped out of the receptacle in individual portions, each portion will contain several kinds or colors of ice cream and have a variegated appearance.

On account of the difficulty of freezing the different ice creams to the same consistency, it usually happens that with several varieties of ice cream in the hopper 18 some will flow more freely than other with the result that, when the valve 20 is opened, a slow-flowing ice cream in one compartment might be held therein and, as a result, the receptacle 32 would be filled by the more freely flowing ice creams and the desired mixture would not be obtained. In order to overcome this I have provided the cable 28 and counterweight 29 for supporting the partition member in an elevated position, shown by broken lines in Fig. 1, so that the different ice creams will be permitted to flow together in the bottom of the hopper 18 and the slow-flowing ice creams will, as a result, be dragged out of their compartments by the others and the desired mixture will be deposited in the receptacle 32, notwithstanding variations in the consistency of different ice creams. The partition member may be freely rotated in the elevated position as well as when down in the hopper so that the different ice creams will always be deposited in the receptacle 32 in spirally arranged layers.

While I have illustrated and described what I now consider to be the preferred form of my invention, it will be understood that various changes may be made in the details of construction without departing from the spirit of the invention as defined in the appended claims.

Having thus described my invention, I claim:

1. In apparatus of the class described, the combination of a hopper, a valve for controlling the discharge from the hopper, means for holding a receptacle in position to be filled from said hopper, and a revoluble partition member in said hopper for dividing the interior thereof into a plurality of compartments.

2. In apparatus of the class described, the combination of a hopper, a valve for controlling the discharge from the hopper, means for holding a receptacle in position to be filled from said hopper, a revoluble partition member in said hopper for dividing the interior thereof into a plurality of compartments, and means for raising said partition member to permit the contents of said compartments to flow together in the bottom of the hopper.

3. In apparatus of the class described, the combination of a hopper having partition means dividing the interior into a plurality of compartments, a valve at the bottom of the hopper for controlling the discharge from said compartments, means for supporting a receptacle in position to be filled from said compartments, and means effecting relative rotation between said receptacle and said compartments whereby the materials discharged from said compartments will be deposited in said receptacle in spirally arranged layers.

4. In apparatus of the class described, the combination of a hopper having partition means therein dividing the interior of the hopper into a plurality of compartments, the bottom of said partition means being arranged to provide a space in the lower part of said hopper wherein the different materials in said compartments are permitted to flow together, means for supporting a receptacle in position below said hopper to receive the materials discharged therefrom, means for controlling the discharge of materials from said hopper, and means for effecting relative rotation between said receptacle and said compartments whereby the materials from the different compartments will be deposited in said receptacle in spirally arranged layers.

5. In apparatus of the class described, the combination of a hopper, a revoluble partition member in said hopper dividing the interior thereof into a plurality of compartments, means whereby said partition member may be supported in different positions longitudinally of the hopper, valve means for controlling the discharge from the bottom of said hopper, a runway for receptacles to be filled from said hopper arranged below the latter, and means associated with said runway for elevating the receptacles into position to be filled from said hopper.

6. In apparatus of the class described, the combination of a hopper, a revoluble partition member in said hopper dividing the interior thereof into a plurality of compartments, a counterweighted cable for supporting said partition member at different elevations in said hopper, means for supporting said cable, valve means for controlling the discharge from the bottom of said hopper, and means for supporting a receptacle in position to be filled from said hopper.

7. In apparatus of the class described, the combination of a frame, a hopper carried by said frame, a revoluble partition member arranged in said hopper and dividing the same into a plurality of compartments, an adjustable bracket on said frame, a counterweighted cable carried by said bracket and having a swivel connection with said partition member permitting rotation of the latter, valve means for controlling the discharge from the bottom of said hopper, and means for supporting a receptacle in position to be filled from said hopper.

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