Oct. 8, 1940. B. C. CASE 2,216,805

POPCORN MACHINE

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Fig. 1.

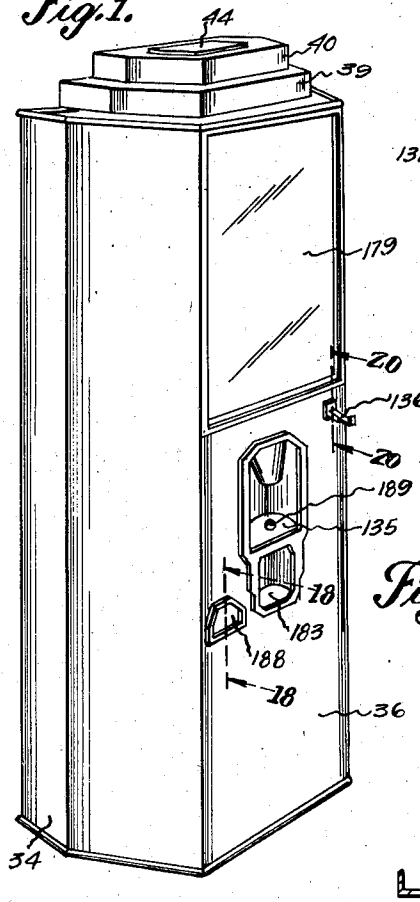


Fig. 17.

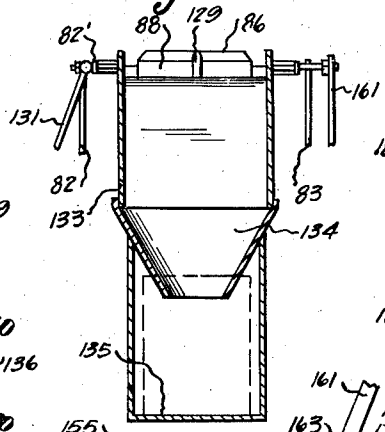


Fig. 18.

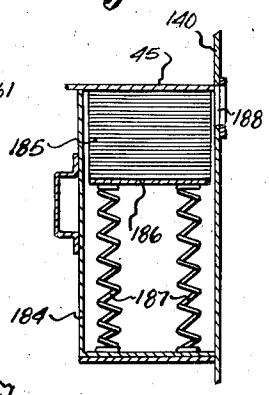


Fig. 19.

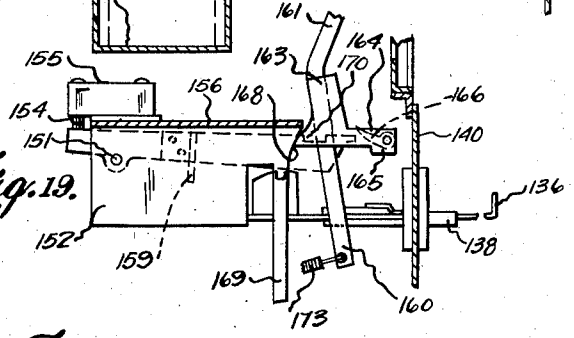


Fig. 20.

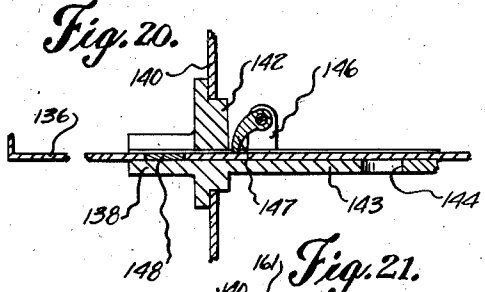


Fig. 22.

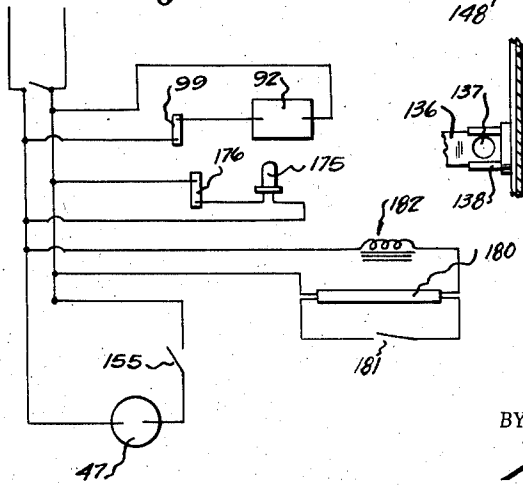
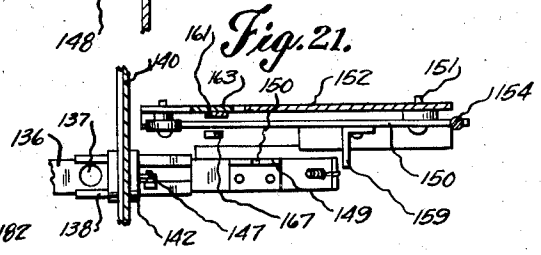


Fig. 21.



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Oct. 8, 1940. B. C. CASE 2,216,805

POPCORN MACHINE

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Fig. 2.

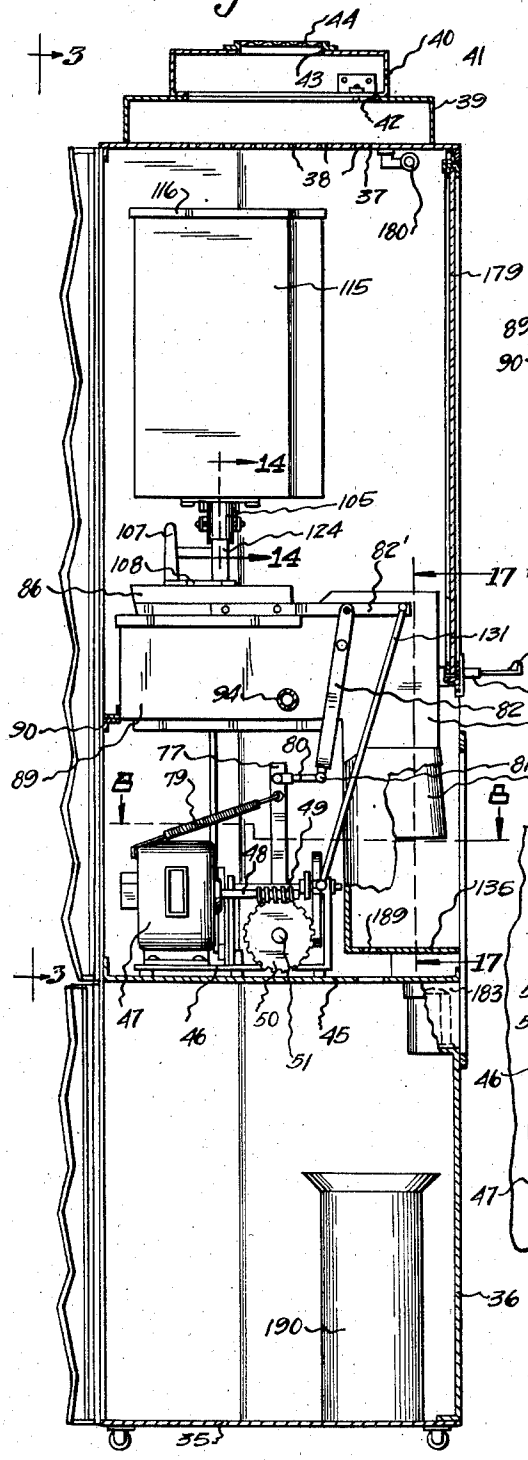


Fig. 5.

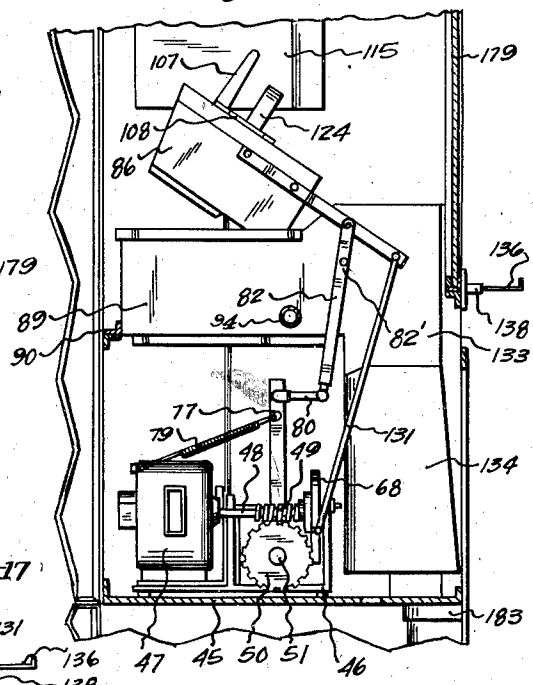
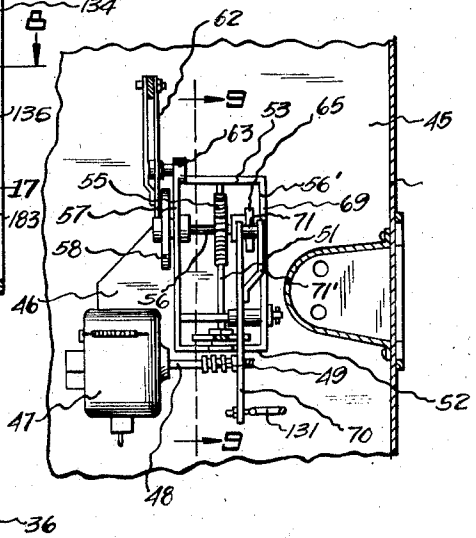


Fig. 8.



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Oct. 8, 1940. B. C. CASE 2,216,805

POPCORN MACHINE

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Fig. 3.

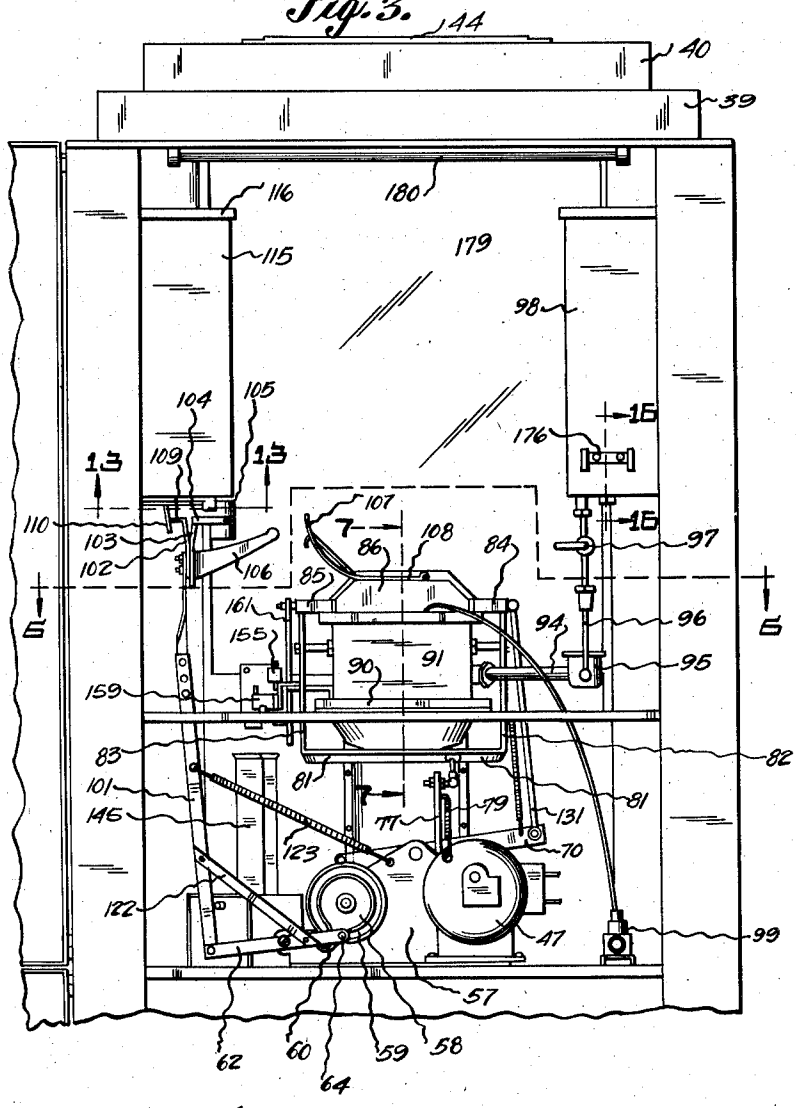
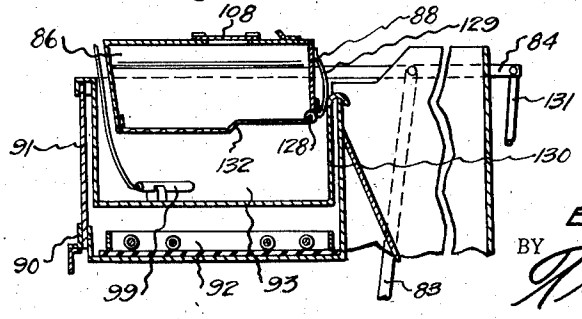


Fig. 7.



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Oct. 8, 1940. B. C. CASE 2,216,805

POPCORN MACHINE

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Fig. 4.

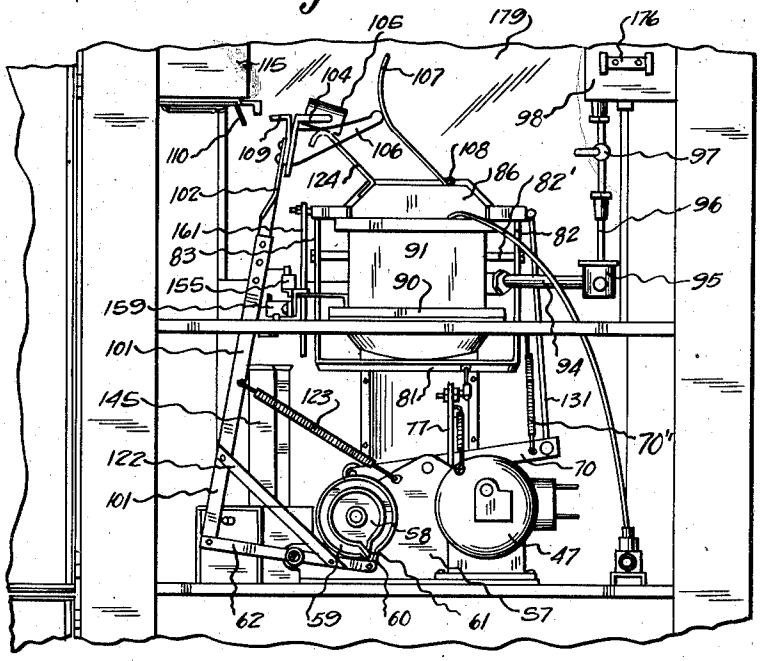
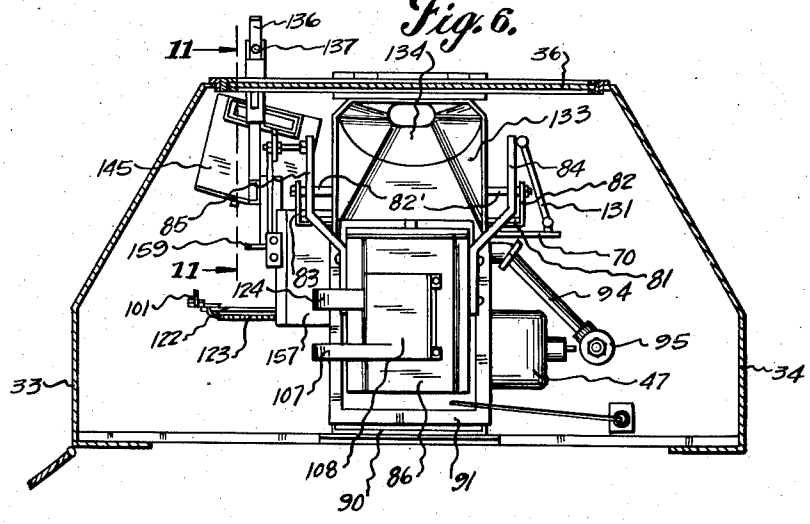


Fig. 6.



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POPCORN MACHINE

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Fig. 9.

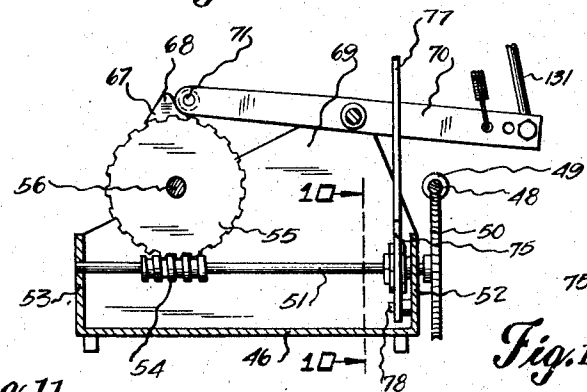


Fig. 10

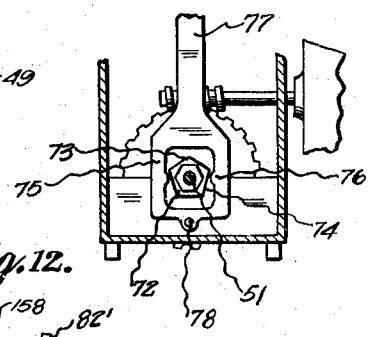


Fig. 11.

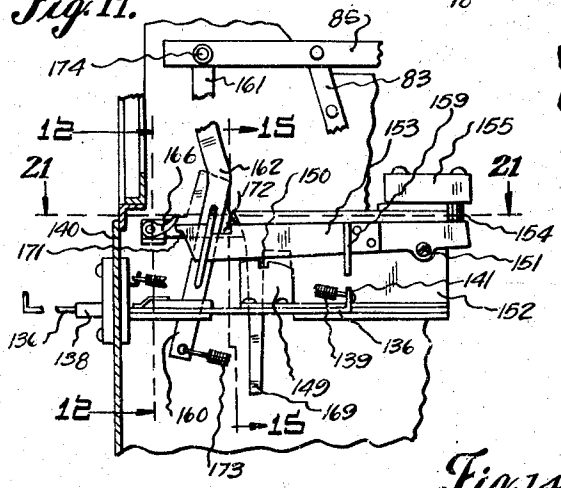


Fig. 12.

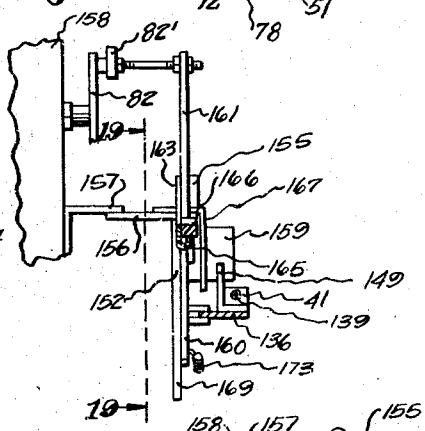


Fig. 14.

Fig. 15.

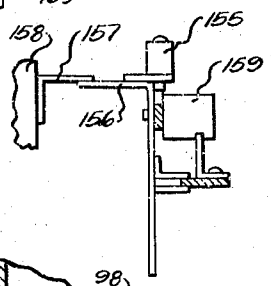


Fig. 13.

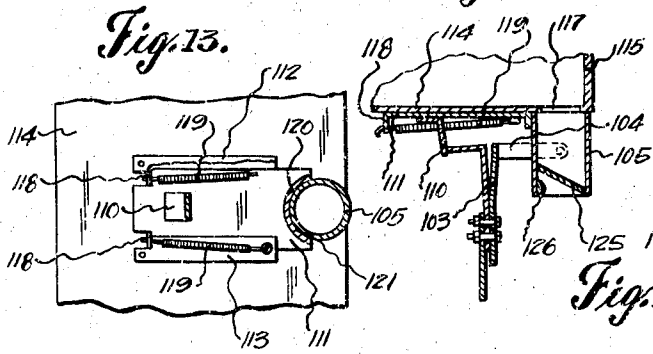
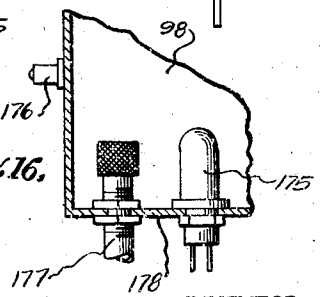


Fig. 16.



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Patented Oct. 8, 1940

2,216,805

UNITED STATES PATENT OFFICE

2,216,805

POPCORN MACHINE

Burgess C. Case, Detroit, Mich.

Application May 3, 1939, Serial No. 271,493

13 Claims. (Cl. 53—4)

My invention relates to a new and useful improvement in a corn popping machine and while the machine is illustrated as of the corn operated automatic type, there are features present which may be used in any type of corn popping machine which will appear obvious as the description proceeds. The machine is of that type of corn popping machine in which a heated grease, in which the corn to be popped is submerged, is used for popping the corn. In this type of machine the corn is submerged in the heated grease and retained submerged until the heat of the grease has popped the corn. Experience has shown that when the grease is maintained at a predetermined temperature, the corn will pop in a definite period of time and it is an object of the present invention to provide a popping machine of this class so arranged and constructed that after the operation of the predetermined period of time, the corn will be elevated and dumped from the container in which it is popped.

Another object of the invention is the provision of a mechanism of this type so arranged and constructed that upon deposit of corn in the popping container, the container is elevated during the period of time for heating and popping the corn.

Another object of the invention is the provision of a mechanism whereby upon the closing of a switch a feeding cup will be removed in a position for dumping a predetermined amount of corn into a popping basket, the popping basket will be agitated and after a predetermined period of time, the basket will be elevated and the popped corn dumped therefrom while maintaining the basket in a state of agitation.

Another object of the invention is the provision of a mechanism whereby upon the closing of a switch the mechanism will be driven through a predetermined cycle of operations terminating in the dumping of the popcorn and the returning of the basket into corn receiving position whereupon the switch will be automatically moved to open position.

Another object of the invention is the provision in a corn popping machine of this class of a movable corn feeding cup so arranged that when it moves to a feeding position, it will be tilted to dump the contents thereof and that when it returns to initial position, it will tilt in order to finish the movement to initial or corn receiving position.

Another object of the invention is the provision in a mechanism of this class of a hopper from which popcorn may be fed and having a slidable closure for moving to close position upon the traveling of the feeding cup to feeding position and yieldable for movement to open position upon the return of the cup to receiving position.

Another object of the invention is the provision in a popping machine of this class of a feeding cup and a receiving basket having a cover mounted thereon so arranged and constructed that the cover is automatically opened immediately prior to the movement of the cup to dumping position and is returned to closing position upon withdrawal of the cup from dumping position.

Another object of the invention is the provision in a corn popping machine of this class of means for maintaining the popping liquid at a predetermined temperature and at a predetermined depth.

Another object of the invention is the provision of a machine of this class which will be simple in structure, economical in manufacture, durable, compact, ornamental in appearance, easily and quickly operated and possessed of a minimum number of parts.

Other objects will appear hereinafter.

The invention consists in the combination and arrangement of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings which form a part of this specification and in which,

Fig. 1 is a front perspective view of the invention,

Fig. 2 is a longitudinal central sectional view of the invention, taken from front to rear, with parts broken away,

Fig. 3 is an enlarged fragmentary view taken on line 3—3 of Fig. 2,

Fig. 4 is an enlarged fragmentary view similar to Fig. 3 with parts broken away showing a successive step in the operation of the invention,

Fig. 5 is a fragmentary side elevational view similar to Fig. 2, showing a further successive movement of the invention,

Fig. 6 is a sectional view taken on line 6—6 of Fig. 3,

Fig. 7 is a fragmentary sectional view taken on line 7—7 of Fig. 3,

Fig. 8 is a fragmentary view taken on line 8—8 of Fig. 2,

Fig. 9 is a fragmentary view taken on line 9—9 of Fig. 8,

Fig. 10 is a fragmentary view taken on line 10—10 of Fig. 9,

Fig. 11 is a fragmentary view taken on line 11—11 of Fig. 6,

Fig. 12 is a fragmentary view taken on line 12—12 of Fig. 11,

Fig. 13 is a fragmentary view taken on line 13—13 of Fig. 3,

Fig. 14 is a fragmentary view taken on line 14—14 of Fig. 2,

Fig. 15 is a fragmentary view taken on line 15—15 of Fig. 11,

Fig. 16 is a fragmentary view taken on line 16—16 of Fig. 3,

Fig. 17 is a sectional view taken on line 17—17 of Fig. 2,

Fig. 18 is a sectional view taken on line 18—18 of Fig. 1,

Fig. 19 is a sectional view taken on line 19—19 of Fig. 12,

Fig. 20 is a fragmentary sectional view taken on line 20—20 of Fig. 1 with parts broken away,

Fig. 21 is a fragmentary sectional view taken on line 21—21 of Fig. 11 with parts broken away,

Fig. 22 is a diagrammatic view of the wiring used in the invention.

The invention as illustrated in the drawings embodies a cabinet having side walls 33 and 34, a bottom 35, a front wall 36, and a top 37 in which perforations 38 are formed, these perforations leading into a housing embodying an enlarged portion 39 having an opening 42 over which the cupshaped housing 40 is positioned. Formed centrally in the top of the housing 40 is an opening 43 over which is positioned a suitable filter or screen 44. The housings 39 and 40 form a dome on the enclosing casing through which fumes and hot air may pass outwardly so as to maintain the mechanism enclosed within the main housing or cabinet in proper temperature for working conditions. Mounted in the cabinet is a supporting partition 45. Mounted on this partition 45 is a supporting frame 46 on which rests and to which is secured an electric motor 47 driving the shaft 48 on which is formed the worm 49 meshing with the worm wheel or gear 50 which is fixedly mounted upon the shaft 51. This shaft 51 is journalled in bearings 52 and 53 which project upwardly from the frame 46. The shaft 51 carries a worm 54 which meshes with the worm wheel 55 fixedly mounted on the shaft 56, this shaft being journalled on the plates 56' and 57, the shaft projecting through the plate 57. Fixedly mounted on the shaft 56 is a cam disc 58 carrying on its outer face the cam groove 59 which bulges outwardly as at 60, the lobe 61 also projecting outwardly at this point. An arm 62 is rockably mounted on the lug 63 which projects outwardly from the member 57, this arm carrying the stud 64 which engages in the groove 59 so that a rocking of the arm 62 is effected upon a rotation of the cam disc 58. The construction is such that as the disc rotates the arm 62 remains stationary except when the lobe 61 is riding over the stud 64. As soon as the lobe has ridden over the stud 64, the stud, through the engagement in the cam groove, will effect a reverse rocking of the arm 62 back to its normal position. Thus the arm is positively rocked in both directions and the rocking of the same is effected once in each direction for each revolution of the cam disc 58.

Fixedly mounted upon the shaft 56 is a cam disc 65 bulged outwardly as at 67 to provide the lobe 68. The arm 70 which is rockably mounted intermediate its ends on the end wall 69 of the frame (see Fig. 9) is provided, as shown in Fig. 8, with a fork forming portion 71' and between the fork of this arm is mounted on a stud 71 a roller which rides the periphery of the cam disk carrying the lobe 68. The construction is such that upon each revolution of the cam disk 65 the arm 70 is positively rocked in one direction against the tension of the spring 70'' which serves to maintain the roller 71'' in engagement with the periphery of the cam disk 65. The rocking of the arm 70 is effected once for each revolution of the cam disk 65.

Fixedly mounted on the shaft 51 is a cam 72 having a plurality of lobes 73 spaced by the flat faces 74. Embracing this cam 73 is a closed yoke or an eccentric strap 75 having a pair of bosses 76 against which the lobes may strike. The bosses are shown positioned opposite each other. This is the location of the bosses so long as none of the lobes 73 are in diametrical alignment. Should the lobes 73 be in diametrical alignment, then the bosses would have to be offset from the positions in Fig. 10. Projecting upwardly from the closed yoke 75 is an arm 77. The construction is such that upon rotation of the shaft 51 the yoke 75 will be thrust first to the one side and then to the other so as to effect a rocking of the arm 77. A spring 79 is connected at one end to the arm 77 adjacent its upper end and at the opposite end this spring 79 is connected to the shelf of the motor 47 so as to normally resist rocking of the arm 77 in one direction. Secured to and projecting outwardly from the upper end of the arm 77 is a link 80 connecting to the base 81 of a yoke embodying the arms 82 and 83. Pivot rods 82' serve to pivotally mount the arms 82 and 83 intermediate their ends on the side walls of the hopper 133. The upper ends of these yoke arms connect two arms 84 and 85 respectively which are secured to the sides of and project outwardly from a popping basket 86 having a screened bottom and a swingable front wall 88. The construction is such that as the shaft 51 rotates and the arm 77 is oscillated the yoke having the arms 82 and 83 will be oscillated in unison with the arm 77 so that the basket 86 is reciprocated, this motion being a slightly jiggling motion so that popcorn positioned in the basket is shaken sufficiently to keep it moving and agitated.

Supported by the plate 89 and the bracket 90 is a container 91 positioned in the bottom of which is an electric heating element 92. Nesting in the container 91 is a receptacle 93 communicating with which is a pipe or conduit 94 leading from a float chamber 95 which is in communication by means of the pipe 96 through the valve 97 with a reservoir 98 in which butter or any suitable grease may be positioned. This butter or grease when melted will flow into the receptacle 93 and maintain the level thereof at a predetermined height depending upon the adjustment of the float operated valve which is contained in the float chamber 95. Positioned in the receptacle 93 so as to be submerged in the grease contained therein is a thermostatic control 99 controlling the circuit to the electric heating element 92. This thermostat 99 is set to close and open the switch to the heating element at predetermined degrees of temperature so that the grease in the receptacle 93 is always maintained at a temperature within a predetermined range.

Pivotally connected at one of its ends to the arm 62 is a bar 101, the upper end of which is connected to a plate 102 and to a plate 103. The plate 103 carries the spaced arms 104 between which is a pivotally mounted feeding cup 105. Projecting outwardly from the plate 103 is an

arm 106 adapted to engage the upwardly engaging tongue 107 extending outwardly from a swingable cover 108 on the top of the basket 86. A rearwardly extending portion 109 is carried by the plate 102 adapted to engage a downwardly extending plate 110 on the slidable closure plate 111. This plate 111 is slidably mounted between guides 112 and 113 mounted on the bottom 114 of the hopper 115 which is provided with a suitable movable cover 116 and into which popcorn may be placed. Formed in the bottom 114 is an outlet or feed opening 117 through which corn may flow from the hopper 115. Projecting downwardly from the rear end of the plate 111 are lugs 118 to each of which is secured one end of a spring 119, the other end of which is secured to the guide strip 112 or 113 to normally maintain the plate 111 moved into position for covering the opening 117 and preventing the passage of corn therethrough. A circular flange 120 projects downwardly from the forward end of the plate 111 which is provided with the arcuate notch 121 around which the flange 120 extends. This notch is struck on substantially the same radius as the cylindrical feeding cup 105 so that the cup may engage in this notch when moved to filling position.

As shown in Fig. 3 and Fig. 4 the arm or bar 101 is connected to the rockable arm 62 by means of the brace 122 so that a swinging of the bar 101 relatively to the arm 62 is prevented. This arm or bar 101 is connected by the spring 123 to the stationary plate 57 and the spring 123 is normally under tension tending to rock the arm 101 to the right of the drawings shown in Fig. 3 and Fig. 4. When the feeding cup 105 is in the position shown in Fig. 3 and in Fig. 14 the corn will pass from the hopper 115 into and fill the cup 105 and when the cup is in such position the plate 111 will be pushed to a position to uncover the opening 117, this movement being against the tension of the springs 119.

The construction is such that as the cam disc 58 is rotated counter-clockwise in the view shown in Fig. 3 the lobe 61 of the cam riding over the stud 64 will rock the arm or beam 62 downwardly at its stud bearing end and move the bar 101 to the right of the drawings. As the cup 105 moves outwardly from beneath the opening 117 the slide plate 111 which serves as a closure for the opening 117 will follow the cup in response to the pull of the springs 119 and serve to close the opening 117. As this movement continues and the cup 105 clears the bottom of the hopper 115 the plate 111 will be in closing position to prevent dropping of corn from the hopper 115. As this movement continues the member 106 which acts as a pusher bar will engage at upwardly turned tongue 107 carried by the lid 108 and lift this lid to open position as shown in Fig. 4. As the lid moves to open position the cup 105 will be carried over the opening which the opened lid has exposed and as this cup arrives at the proper position over the opening, the lower portion thereof will be engaged by the dump bar 124 which is attached to and projects outwardly from the popping basket 86. As the movement of the cup continues after engagement with the dump bar 124 the cup will be tilted as shown in Fig. 4 to spill its contents through the opening in the top of the basket 86. When the cam lobe 61 has ridden over the stud 64 the bar 101 will begin its rocking movement in the reverse direction to bring the cup 105 back to its filling position. As shown in Fig. 14 this cup 105 has an inclined bottom 125 and is provided at one side with a weight 126 which serves as a counterbalance so that when the cup has emptied of its contents and the bar 101 is moved so that the cup is out of disengagement with the member 124 the bottom of the cup will swing downwardly and slide beyond the center on account of the presence of the counter-balance or weight 126. Thus in the return movement the lip of the cup is tilted downwardly at the side facing the hopper so that this downwardly tilted lip will move in under the edge of the hopper bottom 114. It will be noted that when the plate 111 moves to closing position it does not project at the rearward side of the notch 121 beyond the edge of the bottom 114. Thus the opening 117 is not entirely closed as it is a small crack or space left uncovered. Experience has shown that were this plate 111 to project clear across the opening 117 some of the kernels of corn would be caught between the edges of the opening and the forward edge of the plate which would cause an insufficient operation of the device of the crushing of these kernels. With the present construction such projecting kernels are merely held by the plate so that as the cup returns to its position the downward tilt of the approaching lip of the cup causes this lip to slip in under such projecting kernels as may be present. As the return movement continues and the cup engages against the flange 120 the cup moves to vertical or upright position and continues its movement to the filling position. Thus it is seen that there is a cycle of operation involving the movement of the cup to dumping position in which movement the lid of the popping basket is opened automatically, the dumping of the corn of the cup effected and the cup returned to its original position to again be filled allowing the popping basket to fall downward into closing position.

This, of course, is effected when the motor 47 is set into operation. Thus a "charge" of corn is delivered to the popping basket and the grease in the popping basket is of sufficient depth to cover this "charge" of corn.

The cam discs are all rotated to proper positions to properly time the sequence of operations. When the bar 101 has moved in its return movement to a position so that the cup 105 has disengaged from the member 124 and the lid has dropped into closure position, the lobes of the cam 72 will begin engagement against the bosses 76 so that a back and forth shaking of the basket will be effected through a rocking of the arm 79 as shown in Fig. 7. There is sufficient clearance between the basket 86 and the receptacle 93 to permit this reciprocating of the basket. The wall 88 is hinged at 128, to provide a swingable door or gate through which the popped popcorn may be discharged from the basket. This wall 88 carries a bow-shaped spring 129 which engages against the end wall 130 of the receptacle so that the wall 88 is retained in closed position while the basket is being moved back and forth.

Through the gearing used the speed of rotation of the cams is controlled and after a "charge" of corn has been deposited in the basket, the back and forth movement of the basket will continue. When the cam disc 65 has rotated to the position where the lobe 68 rides over the stud 71 the "charge" of corn will have been in the basket a predetermined period of time sufficiently long to permit the hot grease to have popped the corn. As the cam lobe 68 begins to ride over the stud 71, the rockable arm 70 will be rocked downwardly

at its outer end so as to draw downwardly on the rod 131. The upper end of this rod is pivotally connected to the outer end of the handle 82' so that the basket is tilted upwardly on the end of the link 82 as a pivot, the back and forth movement continuing. As the basket moves upwardly so that the spring 129 clears the upper edge of the wall 130, the end wall 88 will fall open permitting the discharge of the popped corn from the basket. It will be noted that the bottom 87 of the basket is upwardly offset as at 132 to provide a ledge which serves to prevent dripping of the grease outwardly from the basket. The end wall 88 is pivoted slightly above the bottom of the basket so that when it falls open it does not lie in alignment with the offset portion of the bottom but is positioned slightly above it so that no grease from this offset portion can flow outwardly over the upper surface of the gate forming wall 88. The jiggling of the basket serves to jar loose any of the kernels of corn whether popped or unpopped which may have a tendency to cling to the bottom. The corn is discharged from the basket into a chute 133 which terminates in the circular portion 134 of such a diameter that the open end of a sack may be slipped over the end thereof, the sack resting upon the ledge 135.

In the invention I have illustrated a coin control embodying a slidable plate 136 having an opening 137 in which the coin may be deposited. This plate 136 slides in a guide sleeve 138 mounted on the front wall of the cabinet. The plate 136 is normally held in outwardly projecting position by means of a spring 139, one end of which is attached to the wall 140 of the cabinet and the other end of which is attached to the upwardly turned end 141 of the plate 136. The sleeve 138 projects outwardly from the block 142 and projecting inwardly therefrom is a plate 143 having an opening 144 formed therein beneath which is positioned a coin receiving receptacle 145. Projecting upwardly from this guide plate 143 is a lug 146 on which is pivoted a dog 147 so arranged that when inward thrust is delivered to the plate 136 the dog 147 will engage in the opening 137 and prevent inward movement of the plate 136. When a coin 148 is placed in the opening 137 the opening 137 will be filled so that the dog 147 cannot prevent inward movement of the plate 136. Projecting upwardly from the plate 136, as shown in Fig. 11, is a cam plate 149 having a notch 150 formed in its upper edge. Rockably mounted by means of the screw 151 on the vertically directed plate 152 is a beam 153 adapted to engage at its rear or inner end with a switch operating stud 154 adapted when pressed inwardly upon the upward tilting of the rear end of the beam 153 to move the switch 155 to open position to open the circuit to the motor 47. The plate 152 is provided with the angularly turned portion 156 which is welded to the bracket 157 on the chute wall 158. Projecting laterally and downwardly from the beam 153 is a plate 159 against which the plate 149 is adapted to engage when the plate 156 is shoved inwardly. As the curved surface of the plate 149 rides under the plate 159 the beam 153 at its forward end is rocked upwardly so that the stud 154 is permitted to move outwardly and close the switch 155. When the plate 159 engages in the notch 150 the plate 136 is held in its inwardly pushed position against the tension of the spring 139 so that the circuit to the motor is maintained closed. When the motor is set into operation the cams are rotated and the first cycle of operation is the movement of the feeding cup 105 into feeding position and backwardly therefrom into receiving position. At the same time, through the action of the cam 72, the reciprocation of the basket 86 is effected. When the cam 65 reaches a predetermined position, the arm 70 is rocked so that the basket is moved to tilted or discharging position shown in Fig. 5.

Pivoted on the end of the arm 85 which projects outwardly from one side of the basket 86 (see Fig. 6) is a depending arm 160, the upper portion of which 161 is angularly turned relatively to the main body of the arm 160 to provide the cam shoulder 162 (see Fig. 11). As shown in Fig. 19 a plate 163 is mounted fixedly on the arm or bar 160 having a forward extension 164 provided at its lower edge with the angularly turned abutment flange 165. Pivotally mounted on the forward end of this projection 164 is a pall 166, the flange 165 serving as an abutment for preventing the pall from tilting downwardly beyond a predetermined distance. Mounted on the arm or bar 160 is an L-shaped guide member 167 which forms with the bar or arm 160 a yoke embracing the forward end of the beam 163 as shown in Fig. 11 and Fig. 12. The plate 152 is provided at its forward end with a curved surface 168 which continues as the front edge of the depending leg 169 as shown in Fig. 19. Against this curved edge a cam forming heel 170 formed on the plate 163 is adapted to engage. As shown in Fig. 19 and in Fig. 11 the beam 153 is provided at its forward end with a nose 171 adapted for being engaged with the end of the pall 166. This beam is also provided rearwardly of the nose 171 in its upper edge with a notch 172 for accommodating the parting member 167 which projects outwardly from the arm or bar 160. The beam 153 is pivoted closely enough toward its rear end that the weight of the beam itself when permitted to rock will force the stud 154, which is normally pressed outwardly by a suitable spring, inwardly into switch opening position. When the coin is deposited in the machine and the plate 136 moved inwardly, the forward end of the beam 153 will rock upwardly and the outwardly projecting portion of the member 167 will engage in the notch 172 formed in the upper edge of the beam. As the basket tilts to discharging position the forward end of the arm 85 will tilt downwardly forcing the bar or arm 160 to travel downwardly. A spring 173 which is attached at one end to the lower end of the arm or bar 160 at its opposite end to a stationary part of the machine will serve to maintain the heel 170 in engagement with the surface 168. In this downward movement the pall 166 will be carried downwardly so as to be positioned below the nose 161. When the basket has discharged its contents the cam will return it to its normal position which is the position shown in Fig. 2. In this movement back to its normal position, the arm 85 will rock upwardly at its forward end drawing the bar or arm 160 upwardly. The pall engaging the under surface of the nose 171 will rock the beam 153 at its forward end farther upwardly, thus disengaging the plate 159 from the notch 150 in the plate 149 and permitting the coin receiving plate 136 to snap outwardly in response to the tension of the spring 139 as the upward movement of the forward end of the arm 85 continues the heel 170 riding over the curved or cam surface 168 and the plate 152 will swing the arm or bar 160 on its pivot 174 so that the

pall 166 is moved forwardly sufficient to disengage with the nose 171. This engagement comes as the movement of the various parts reaches their final position so that the beam 153 is released at its forward end for downward rocking which forces the stud 154 inwardly into switch closing position. There is thus provided a means for assuring the operation of the device through a complete cycle and automatically breaking the circuit to the motor upon the completion of the cycle.

In the reservoir 98 I mount an electric heater 175 in the circuit at which there is provided a thermostat 176 mounted on the outer surface of one of the walls of the reservoir 98. The construction is such that when the heat of the reservoir 98 reaches a predetermined degree the circuit to the heater 175 is broken. The outlet delivery pipe 177 which communicates with the reservoir 98 through the bottom 178 is projected above the bottom 178 so that there will always be maintained around the heater 175 a quantity of grease, butter, or the like so that a burning out of the heater 175 will be prevented. This liquefied butter or grease, as previously mentioned, will flow through the valve 97 and the pipe 96 into float valve chamber 95, from which it is delivered by the pipe 94 into the receptacle 91.

The upper portion of the front wall of the cabinet is enclosed by a glass panel 179 so that the operation of the mechanism is visible to the operator. An electric fluorescent light tube 180 is mounted within the cabinet adjacent the forward end thereof and this light is controlled by a manually operable switch 181, a choke coil 182 being interposed in the circuit leading to the light tube 180.

As shown in Fig. 1, there is a cavity 183 in which may be positioned a salt cellar or the like. A container 184 is provided for sacks 185 which are pressed at follower 186 and the springs 187 upwardly to the receiving opening 188 formed in the front wall of the cabinet. These sacks are of the proper size and dimension to contain the amount of popcorn popped in a single operation. Formed in the ledge or support 135 on which the sack is rested while being filled, are openings 189 so that stray particles of popcorn may pass therethrough into the receptacle 190 positioned in the cabinet. It is thus seen that I have provided a completely automatic corn popping machine in which the various functions are performed in a cycle of operations and in which the popping is effected by immersing in grease which is maintained at a substantially constant temperature and which is fed to the grease receptacle in proper quantities to maintain the level of the grease in the heated grease receptacle substantially constant.

While I have illustrated and described the preferred form of construction, I do not wish to limit myself to the precise details of structure shown but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

What I claim as new is:

1. In a corn popping machine of the class described: a liquid receptacle for the reception of liquid; a popping basket having perforations therein adapted for seating in said receptacle with the bottom thereof below the level of liquid in said receptacle for permitting submergence in said liquid of unpopped corn delivered to said basket; means for elevating said basket and discharging popped corn therefrom; and means for jiggling said basket while seated in said receptacle and while the popped corn is being discharged from said basket.

2. In a corn popping machine of the class described: a receptacle for the reception of liquid; means for heating the liquid in said receptacle; a perforated popping basket movable into and out of said receptacle said basket upon movement into said receptacle having the bottom thereof positioned below the level of liquid in said receptacle and adapted for moving out of said receptacle for discharging popped corn contained therein; means for depositing unpopped corn in said basket when moved into said receptacle; means for jiggling said basket while in said receptacle and while moving out of said receptacle and while discharging popped corn contained therein; a cam mechanism for operating said depositing means; a cam mechanism for operating said jiggling means; means for moving said basket into said receptacle and out of said receptacle; a cam mechanism for operating said moving means; and a motor driven mechanism for actuating said cams in a predetermined cycle of operation.

3. In a corn popping machine of the class described: a receptacle adapted for the reception of liquid; means for heating the liquid in said receptacle; a perforated popping basket movable into and out of said receptacle and adapted when moved into said receptacle for having its bottom positioned below the level of liquid in said receptacle, and adapted, upon moving out of said receptacle, for discharging popped corn contained therein; means for moving said basket into and out of said receptacle; means for depositing a predetermined quantity of unpopped corn in said basket while the same is in said receptacle; means for jiggling said basket while in said receptacle and while moving to discharging position and discharging popped corn therefrom; a cam for operating said jiggling means; a cam for operating said depositing means, said cams being initially operative simultaneously; and a cam for operating said moving means for moving said basket out of said receptacle and into discharging position at a predetermined period of time after the operation of said depositing means, said jiggling means being operative during said predetermined period of time and during the movement of said basket out of said receptacle into discharging position.

4. In a corn popping machine of the class described: a receptacle adapted for the reception of liquid; means for heating the liquid in said receptacle; a perforated popping basket movable into and out of said receptacle and adapted when moved into said receptacle for having its bottom positioned below the level of liquid in said receptacle, and adapted, upon moving out of said receptacle, for discharging popped corn contained therein; means for moving said basket into and out of said receptacle; means for depositing a predetermined quantity of unpopped corn in said basket while the same is in said receptacle; means for jiggling said basket while in said receptacle and while moving to discharging position and discharging popped corn therefrom; a cam for operating said jiggling means; a cam for operating said depositing means, said cams being initially operative simultaneously; a cam for operating said moving means for moving said basket out of said receptacle and into discharging position, at a predetermined period of time after the operation of said depositing means,

said jiggling means being operative during said predetermined period of time and during the movement of said basket out of said receptacle into discharging position; and power-driven means for operating said cams in said sequence.

5. In a corn popping machine of the class described: a receptacle adapted for the reception of liquid; means for heating the liquid in said receptacle; a perforated popping basket movable into and out of said receptacle and adapted when moved into said receptacle for having its bottom positioned below the level of liquid in said receptacle, and adapted, upon moving out of said receptacle, for discharging popped corn contained therein; means for moving said basket into and out of said receptacle; means for depositing a predetermined quantity of unpopped corn in said basket while the same is in said receptacle; means for jiggling said basket while in said receptacle and while moving to discharging position and discharging popped corn therefrom; a cam for operating said jiggling means; a cam for operating said depositing means, said cams being initially operative simultaneously; a cam for operating said moving means for moving said basket out of said receptacle and into discharging position at a predetermined period of time after the operation of said depositing means, said jiggling means being operative during said predetermined period of time and during the movement of said basket out of said receptacle into discharging position; power-driven means for operating said cams in said sequence; and means for maintaining the heat of said liquid in said receptacle at substantially a predetermined temperature.

6. In a corn popping machine of the class described; a receptacle adapted for the reception of liquid; means for heating the liquid in said receptacle; a perforated popping basket movable into and out of said receptacle and adapted when moved into said receptacle for having its bottom positioned below the level of liquid in said receptacle, and adapted, upon moving out of said receptacle, for discharging popped corn contained therein; means for moving said basket into and out of said receptacle; means for depositing a predetermined quantity of unpopped corn in said basket while the same is in said receptacle; means for jiggling said basket while in said receptacle and while moving to discharging position and discharging popped corn therefrom; a cam for operating said jiggling means; a cam for operating said depositing means, said cams being initially operative simultaneously; a cam for operating said moving means for moving said basket out of said receptacle and into discharging position at a predetermined period of time after the operation of said depositing means, said jiggling means being operative during said predetermined period of time and during the movement of said basket out of said receptacle into discharging position; power-driven means for operating said cams in said sequence; means for maintaining the heat of said liquid in said receptacle at substantially a predetermined temperature; means for delivering liquid into said receptacle; and means for maintaining a substantially constant level of liquid in said receptacle.

7. In a corn popping machine of the class described: a receptacle adapted for the reception of liquid; means for heating the liquid in said receptacle; a perforated popping basket movable into and out of said receptacle and adapted when moved into said receptacle for having its bottom positioned below the level of liquid in said receptacle, and adapted, upon moving out of said receptacle, for discharging popped corn contained therein; means for moving said basket into and out of said receptacle; means for depositing a predetermined quantity of unpopped corn in said basket while the same is in said receptacle; means for jiggling said basket while in said receptacle and while moving to discharging position and discharging popped corn therefrom; a cam for operating said jiggling means; a cam for operating said depositing means, said cams being initially operative simultaneously; a cam for operating said moving means for moving said basket out of said receptacle and into discharging position at a predetermined period of time after the operation of said depositing means, said jiggling means being operative during said predetermined period of time and during the movement of said basket out of said receptacle into discharging position; power-driven means for operating said cams in said sequence; means for maintaining the heat of said liquid in said receptacle at substantially a predetermined temperature; means for delivering liquid into said receptacle; means for maintaining a substantially constant level of liquid in said receptacle; and means for preheating said liquid prior to its delivery into said receptacle.

8. In a corn popping machine of the class described: a liquid receptacle adapted for the reception of liquid; a perforated popping basket movable into said receptacle, with its bottom below the normal level of liquid therein, and movable out of said receptacle for discharging popped corn therefrom; means for depositing a quantity of unpopped corn in said basket; means for jiggling said basket; means for moving said basket out of said receptacle into discharging position and retaining said basket in discharging position for a predetermined period of time and then returning said basket to said receptacle; an electric motor; a switch for controlling said motor, said motor being operable while said switch is closed; a cam mechanism operated by said motor for operating said depositing means immediately upon the operation of said motor; a cam mechanism for continuously operating said jiggling means during the operation of said motor; a cam mechanism for operating said moving means at a predetermined time subsequent to the operation of said depositing means; manually operable means for closing said switch; and means operable upon the return of said basket to said receptacle from said discharging position for opening said switch.

9. In a corn popping machine of the class described: a liquid receptacle adapted for the reception of liquid; a perforated basket movable into said receptacle with its bottom below the normal level of liquid therein and movable out of said receptacle for discharging popped corn therefrom; means for depositing a quantity of unpopped corn in said basket; means for jiggling said basket; means for moving said basket out of said receptacle into discharging position and retaining said basket in discharging position for a predetermined period of time and then returning said basket to said receptacle; an electric motor; a switch for controlling said motor; a cam mechanism for operating said depositing means immediately upon the operation of said motor; a cam mechanism for operating said jiggling means during the operation of said motor; a cam mechanism for operating said moving means at a pre-

determined time subsequent to the operation of said depositing means; manually operable means for closing said switch; and means operable upon the return of said basket to said receptacle from said discharging position for opening said switch; and means for retaining said switch in closed position subsequent to the closure thereof until the return of said basket into said receptacle from discharging position.

10. In a corn popping machine of the class described: a basket adapted for the reception of unpopped corn; a container for containing unpopped corn; a receptacle adapted for receiving from said container a predetermined amount of unpopped corn; a lid on said basket; means for moving said receptacle from corn receiving position to a position for depositing the same in said basket; means for raising said lid upon movement of said receptacle to depositing position; means for tilting said receptacle for discharging the contents thereof into said basket subsequent to the raising of said lid; and means for returning said receptacle to corn receiving position.

11. In a corn popping machine of the class described: a basket adapted for the reception of unpopped corn; a container for containing unpopped corn; a receptacle adapted for receiving from said container a predetermined amount of unpopped corn; a lid on said basket; means for moving said receptacle from corn receiving position to a position for depositing the same in said basket; means for raising said lid upon movement of said receptacle to depositing position; means for tilting said receptacle for discharging the contents thereof into said basket subsequent to the raising of said lid; means for returning said receptacle to corn receiving position; a closure for said container adapted for closing said container upon movement of said receptacle to corn depositing position; and means for moving said closure to open position upon return of said receptacle to corn receiving position.

12. In a corn popping machine of the class described: a liquid receptacle adapted for the reception of liquid; a perforated popping basket movable into said receptacle, with its bottom below the normal level of liquid therein, and movable out of said receptacle for discharging popped corn therefrom; means for moving said basket out of said receptacle into discharging position and returning said basket to said receptacle; an electric motor; a switch for controlling said motor; means operable at a predetermined time after the starting of said motor for operating said moving means; manually operable means for closing said switch; and means operable upon the return of said basket to said receptacle from said discharging position for opening said switch.

13. In a corn popping machine of the class described: a liquid receptacle adapted for the reception of liquid; a perforated popping basket movable into said receptacle, with its bottom below normal level of liquid therein, and moving out of said receptacle for discharging popped corn therefrom; means for heating the liquid in said receptacle; an electric motor; a switch for controlling said motor; manually operable means for closing said switch; releasable means for retaining said switch in closed position; means operable, subsequent to the operation of said motor at a predetermined period of time, for operating said moving means; means operable upon the return of said basket to said receptacle from said discharging position for releasing said releasing means; and means for moving said switch to open position upon the release of said releasing means.

BURGESS C. CASE.