

**Sept. 9, 1952**

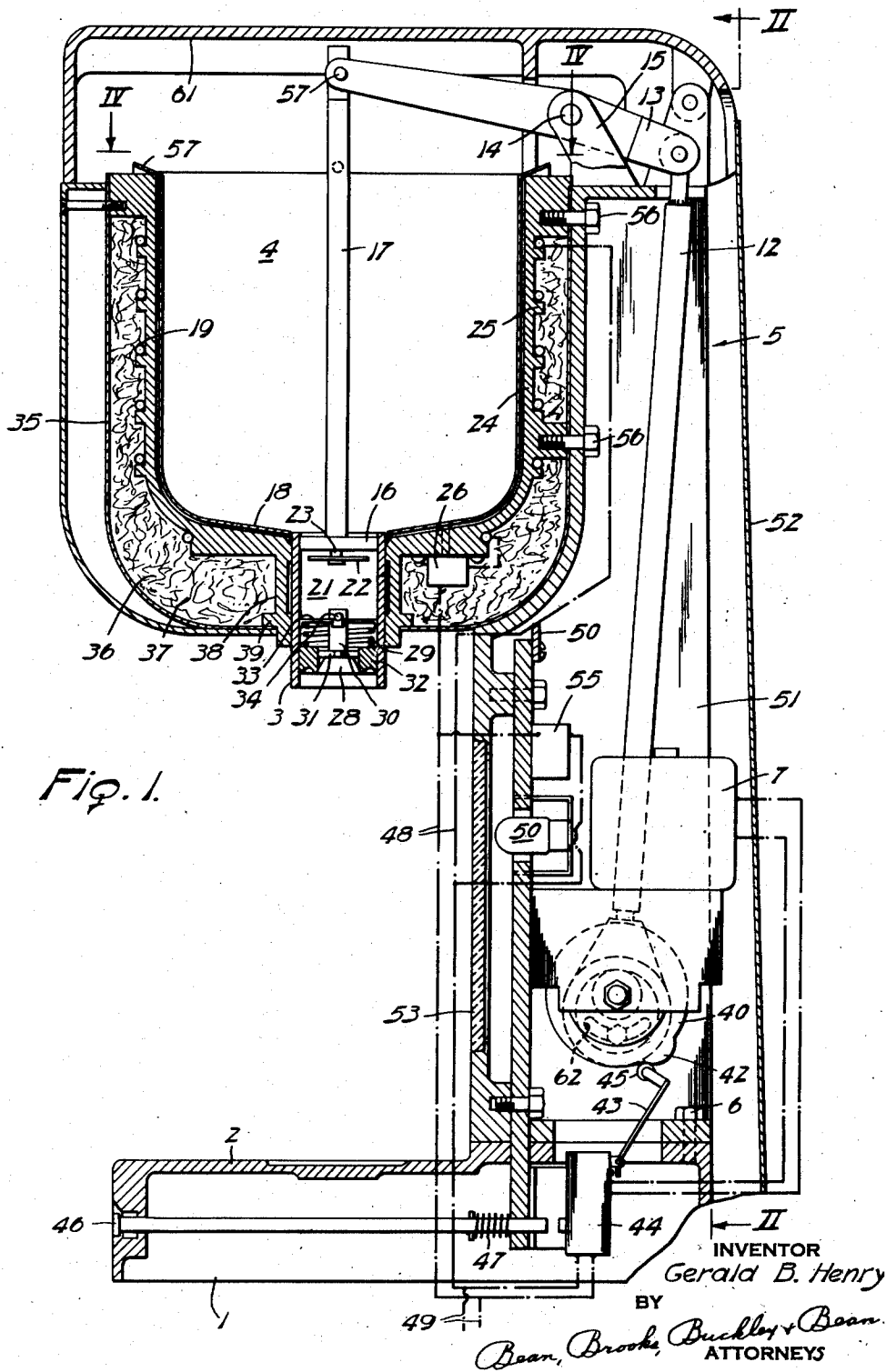
**G. B. HENRY**

**2,609,966**

## HOT FUDGE DISPENSER

Filed July 28, 1948

2 SHEETS—SHEET 1



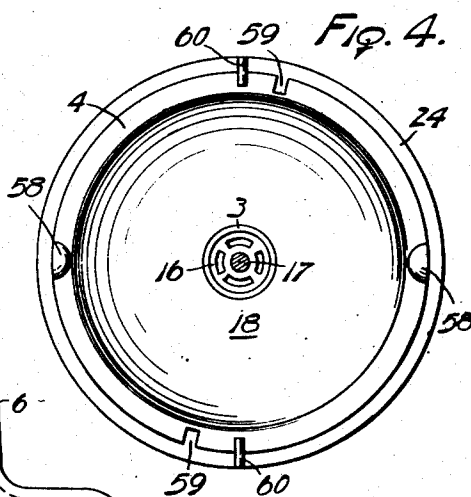
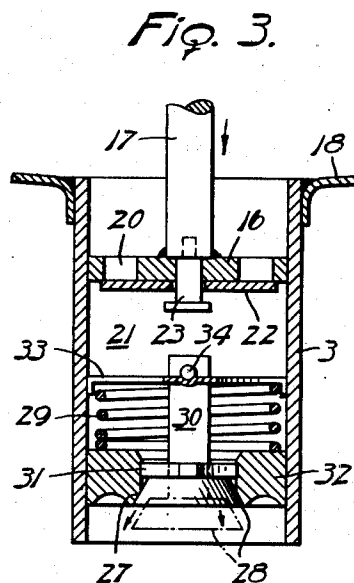
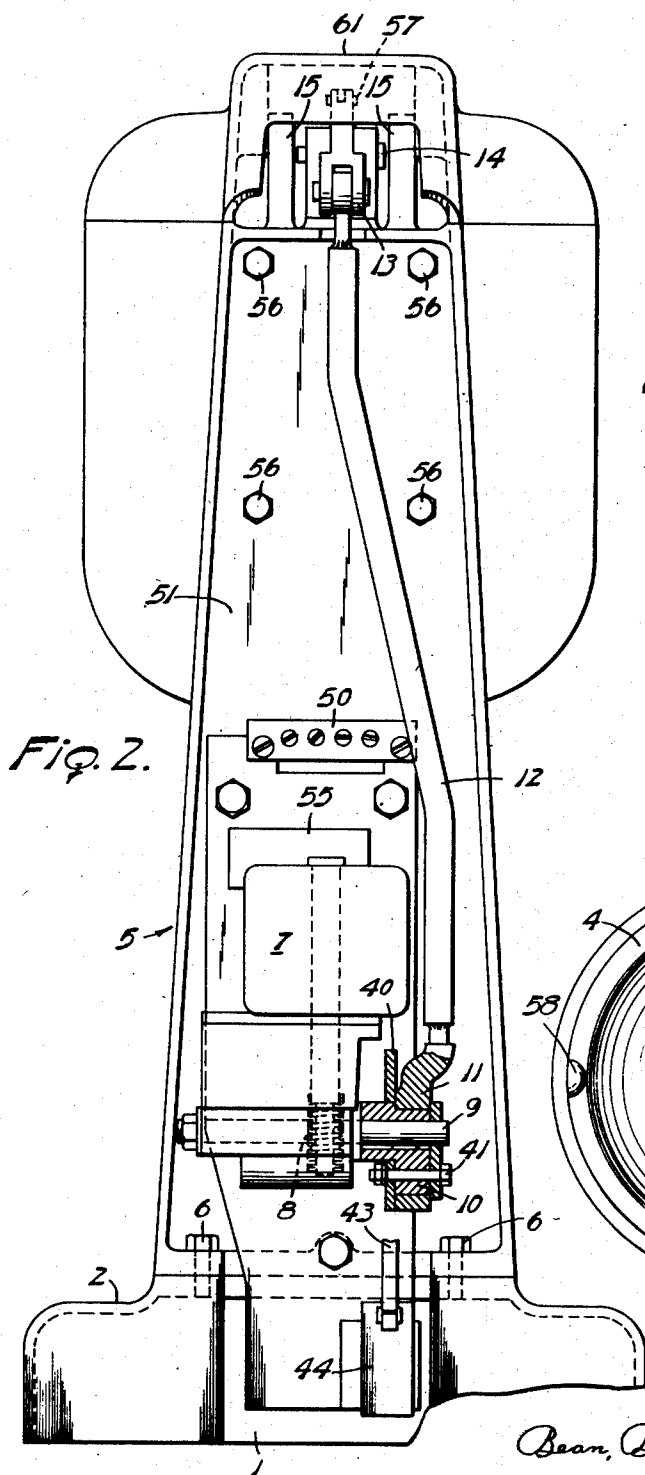
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HOT FUDGE DISPENSER

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2 SHEETS—SHEET 2



INVENTOR  
Gerald B. Henry  
BY  
Bean, Brooks, Buckley & Bean  
ATTORNEYS

## UNITED STATES PATENT OFFICE

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## HOT FUDGE DISPENSER

Gerald B. Henry, Buffalo, N. Y., assignor to  
Henry and Henry, Inc., Buffalo, N. Y.

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3 Claims. (Cl. 222—70)

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This invention relates to soda fountain equipment, and more particularly to apparatus for dispensing hot fudge or other topping for sundaes and the like. Heretofore the hot fudge has been ladled from a dish or container having a replaceable cover which first necessitated removal of the cover and then the dipping of the fudge content from the container by means of a spoon or other implement. This procedure resulted in the fudge dripping from the ladle and thereby creating a messy and unsanitary condition, and further relied upon the human factor to dish out uniform quantities of the fudge with the further result that the fudge applications were irregular in content even to the extent of involving waste thereof.

The primary object of the present invention is to provide a fudge or topping dispenser which will be efficient and practical in use and one in which the topping will be delivered in uniform increments. Further, the invention has for its object to facilitate the application of the topping to the sundae or frozen dainty in an expeditious and sanitary manner.

The foregoing and other objects will manifest themselves as the description progresses, reference being had therein to the accompanying drawings, in which

Fig. 1 is a vertical sectional view through a dispenser constructed in accordance with the present invention;

Fig. 2 is a rear view of the dispenser with the closure plate removed and as it would appear substantially on the plane of line II—II of Fig. 1;

Fig. 3 is a detailed sectional view through the ejecting or delivery nozzle; and

Fig. 4 is a plan view of the fudge pot as viewed from a plane about on line IV—IV of Fig. 1.

Referring more particularly to the drawings, the numeral 1 designates a base having a platform 2 on which a sundae is placed to receive the hot fudge as delivered by the nozzle 3 from the pot 4. A standard or upright 5 which is preferably separate from, but detachably secured to, the base by means of fasteners 6, supports the fudge pot at its upper end in a manner to overhang the platform 2. The standard is hollowed to enclose a fudge dispensing mechanism which comprises an electric motor 7 connected by a reduction gearing unit 8 to a timing shaft 9 that carries an eccentric or cam 10 for revolving therewith. An eccentric strap 11 encircles the eccentric 10 and in turn is connected by a pitman 12 to a lever 13 fulcrumed at 14 on a bracket 15. The opposite end of the lever provides a relatively longer arm which overhangs the fudge pot and suspends the plunger 16 by means of a connecting rod 17.

The feeding plunger has a cycle of movement involving an ejecting or feeding stroke down-

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ward and a refilling or upward stroke with the plunger normally resting in the upper end of the nozzle forming tube 3 and approximately in the plane of the bottom wall 18 of the fudge pot 4. This normal resting position is located within the heating zone of the pot and therefore the fudge or topping which is maintained in a liquid state by reason of the heating element 19 will freely gravitate or flow through the inlet openings 20 through the plunger into the measuring chamber 21 within the nozzle. By this arrangement the next charge or increment of hot fudge will be ready for delivery upon the following descent of the plunger. During such feeding stroke of the plunger the inlet openings 20 are automatically closed by a valve 22 which is loosely suspended by a pin 23 for uncovering the inlet opening when the plunger ascends to its position of rest. The heating element 19 may be of any suitable form and is herein shown as an electrical resistance element encircling or wrapped about the pot on a cup shaped insulating frame or form 24, the successive coils of the heating element being spaced to advantage by means of the preformed ribs 25. A thermostat 26 in circuit with the heater will maintain the hot fudge at the desired temperature and state of fluidity.

The delivery nozzle 3 is provided with a delivery orifice 27 which is normally closed by a valve 28 under the urge of a spring 29. The valve is frusto-conical in shape to conformably engage the like shaped seat 27 for effecting a clean shearing cutoff after the increment of fudge has been discharged. The valve is given a guided movement by having its stem 30 slidably fitting a spider 31 suitably fixed within a seat member 32. The spring 29 rests upon the seat member and has its upper end reacting upon an open frame 33 which guidingly fits the chamber 21 and is secured to the upper end of the stem 30 by a cross pin 34. Consequently, the valve is given a steady and well guided movement as it opens under the downward pressure of the plunger and closes under the upward liquid intaking stroke thereof.

The plunger is timed to make one complete cycle for each operation, coming to rest in its uppermost position where the hot liquid is free to flow into the chamber 21, ready for the next ejection. After completing its delivery stroke and as it returns to its normal position of rest, the upward travel of the plunger will assist the spring 29 in closing the shut-off valve 28 by reason of the vacuum produced in such chamber. The separated charge of fudge in the chamber 21 is maintained fluid not only by reason of the heating element 19 but also by reason of the jacket 35 which encloses the heating element as well as the chamber, thereby providing an enveloping heating chamber 36 which may be filled more or less with suitable heat insulating

material 37. The heating element 19 may be extended about the extension 38 depending from the cupped support 24 but for all practical purposes the enveloping chamber 36, coupled with the heat conducted from the superimposed body of hot topping, will serve to maintain the separated charge within the measuring chamber 21 sufficiently fluid and at the proper temperature. The depending extension 38 is provided with a shoulder 39 to serve in the capacity of a sustaining spacer for such jacket 35.

A timing disk or wheel 40 is fixed to rotate with the eccentric 10, being secured thereto by a fastener 41. The periphery of the timing disk is provided with a lobe 42 designed to trip a lever 43 for opening the motor switch 44, the lever having a roller 45 tracking upon the periphery of the timing disk as the latter rotates. Therefore, as the plunger 16 approaches the completion of its cycle, the lobe 42 will open the motor switch and cause the plunger to come to rest at its predetermined uppermost position.

To set the fudge dispenser in operation, the term fudge comprehending any suitable topping, the motor switch is closed by means of a knob 46 which is slidably mounted in the base 1 and normally held retracted by means of a spring 47. A suitable switch may be provided in the heating circuit 48, if desired. However, the circuit terminals 49 may be in the form of a plug for ready connection to a wall receptacle so that when the dispenser is plugged into the wall socket the resistance 19 will become operative and thermostatically controlled. Removal of the plug terminals 49 will disconnect the heating element from the source of energy. A bus bar 50 arranged within the standard 5 provides ready access for the electric circuits.

The transmission containing chamber 51 of the hollowed standard may be closed by a removable section 52. The front of the standard may be provided with a window 53 illuminated by a light 54 and a flasher switch 55 to produce an attractive advertising effect, which may be operative continuously or only while the plunger is ejecting the topping, as desired.

The topping dispenser is of practical and economical design intended to produce a sturdy structure having a supporting framework of three major parts, namely the base 1, a standard 5, and the fudge pot form 24, the latter being secured to the upper end of the standard by suitable fasteners 56. The fudge pot 4 itself may be in the form of a removable liner nestingly received within the form 24, but readily removable therefrom after first disconnecting the plunger connecting pin 57, as by grasping the finger holds 58, rotating the marginal or rim notches 59 into registry with the overhanging form carried pins 60 and lifting the liner together with the nozzle 3 free from the supporting form. A suitable closure 61 is provided to enclose the fudge pot as well as the upper portion of the power transmission for the plunger.

The timing disk is made adjustable by reason of the arcuate slot 62 therein in which slot the adjustment retaining fastener 41 engages. By suitable adjustment the motor arresting lobe 42 may be accurately placed to bring the plunger 16 to its desired position of rest.

In use a dish of ice cream will be placed upon the platform 2 and thereafter the knob 46 depressed to start the ejecting plunger in motion.

As the plunger descends, the valve 22 will close while the shut-off valve 23 will open and the fudge will be delivered from the nozzle 3 onto the underlying frozen product without further attention of the attendant. As soon as the topping has been applied to the sundae, the return stroke of the plunger will assist the spring 29 in closing the shut-off valve while the inlet valve 22 will open to allow a fresh charge of the topping entering the chamber 21. As the plunger reaches its uppermost position the lobe 42 will trip the motor switch and arrest further plunger travel.

While the foregoing description has been given in detail, it is without thought of limitation since the inventive principles involved are capable of assuming other physical embodiments without departing from the spirit of the invention and the scope of the appended claims.

What is claimed is:

1. A hot fudge dispenser comprising a support having a base formed with a platform, a standard rising from the base and provided with a transmission chamber, and a fudge pot support carried by the standard and overhanging the platform, a fudge pot mounted on the support and having a delivery nozzle with a measuring chamber therein directed downwardly through an opening in the support for discharging onto a receptacle on the platform, a plunger movable back and forth in the measuring chamber, and a power drive including a transmission extending upwardly through the chamber of the standard and having a lever with a free end overhanging the fudge pot and removably connected to the plunger for operating the latter.

2. A hot fudge dispenser comprising a support having a base with a standard rising therefrom, an open top pot supported by the standard at its upper end to overhang the base, said pot having a depending measuring chamber and a discharge orifice in its bottom, a spring seated cut-off valve in the orifice, a plunger having a sliding fit in the measuring chamber and operable to intake fluid from the pot on its upstroke, said plunger moving upwardly from the cut-off valve during its intake stroke, and power means operable to depress the plunger to express a measured charge of fluid from the chamber through the valved orifice, said means including a rockable lever pivoted on the standard and overhanging the open top pot, a plunger carrying rod connected to the rockable lever, and time mechanism operating the power means through a cycle of movement to deliver the charge of fluid and then intake a new charge into the measuring chamber before coming to rest.

3. A hot fudge dispenser as claimed in claim 2, wherein a cover is provided for the open top pot to enclose said power means.

GERALD B. HENRY.

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