

April 15, 1958

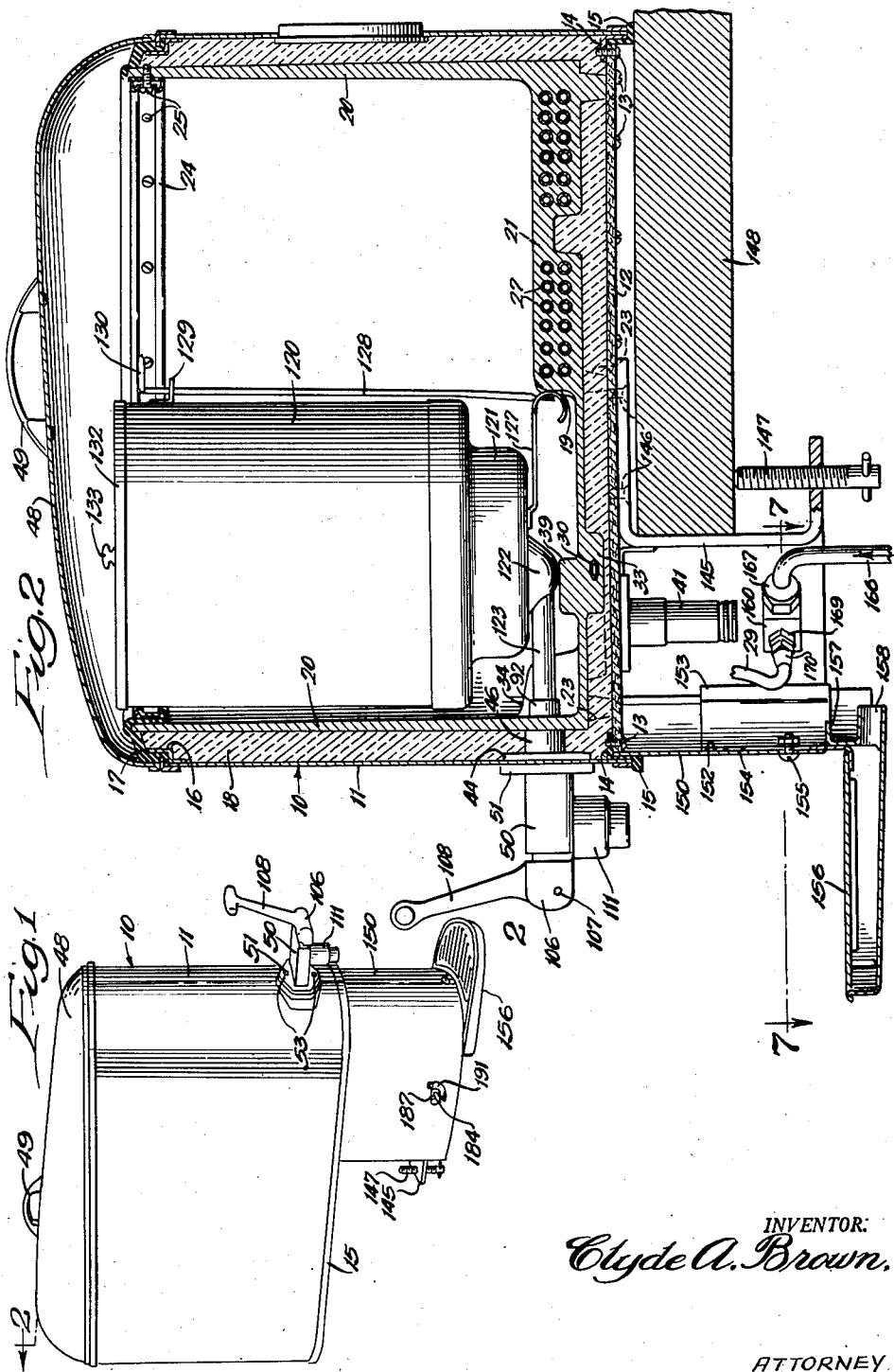
C. A. BROWN

2,830,737

FOUNTAIN DISPENSERS

Original Filed Jan. 4, 1950

7 Sheets-Sheet 1



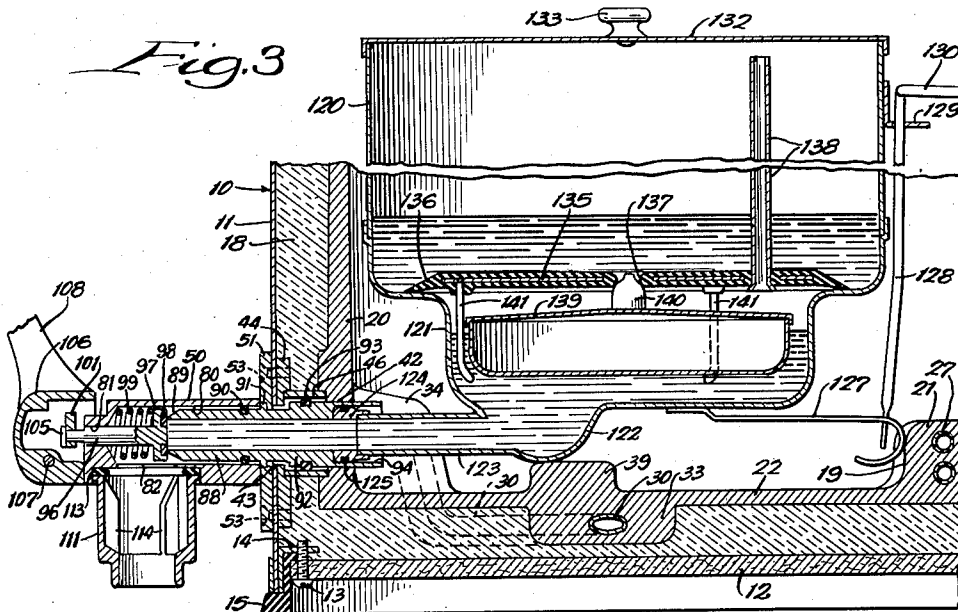
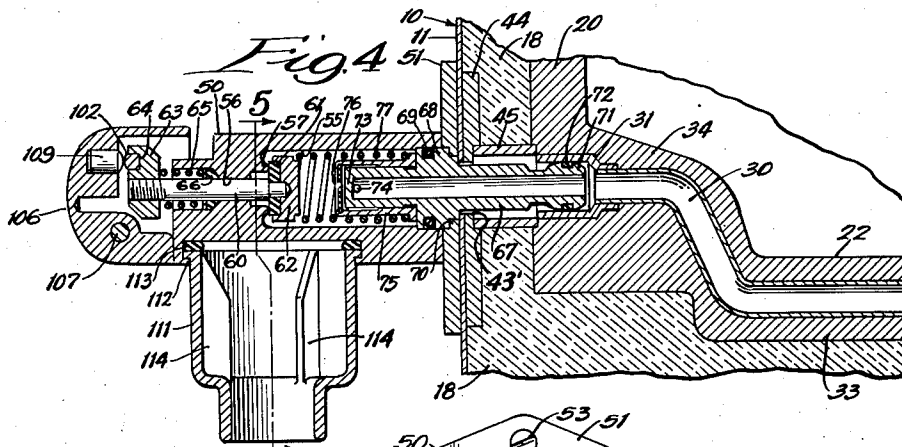
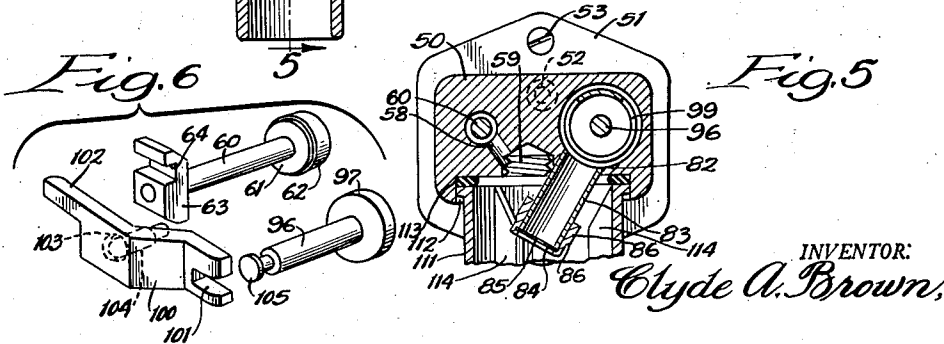
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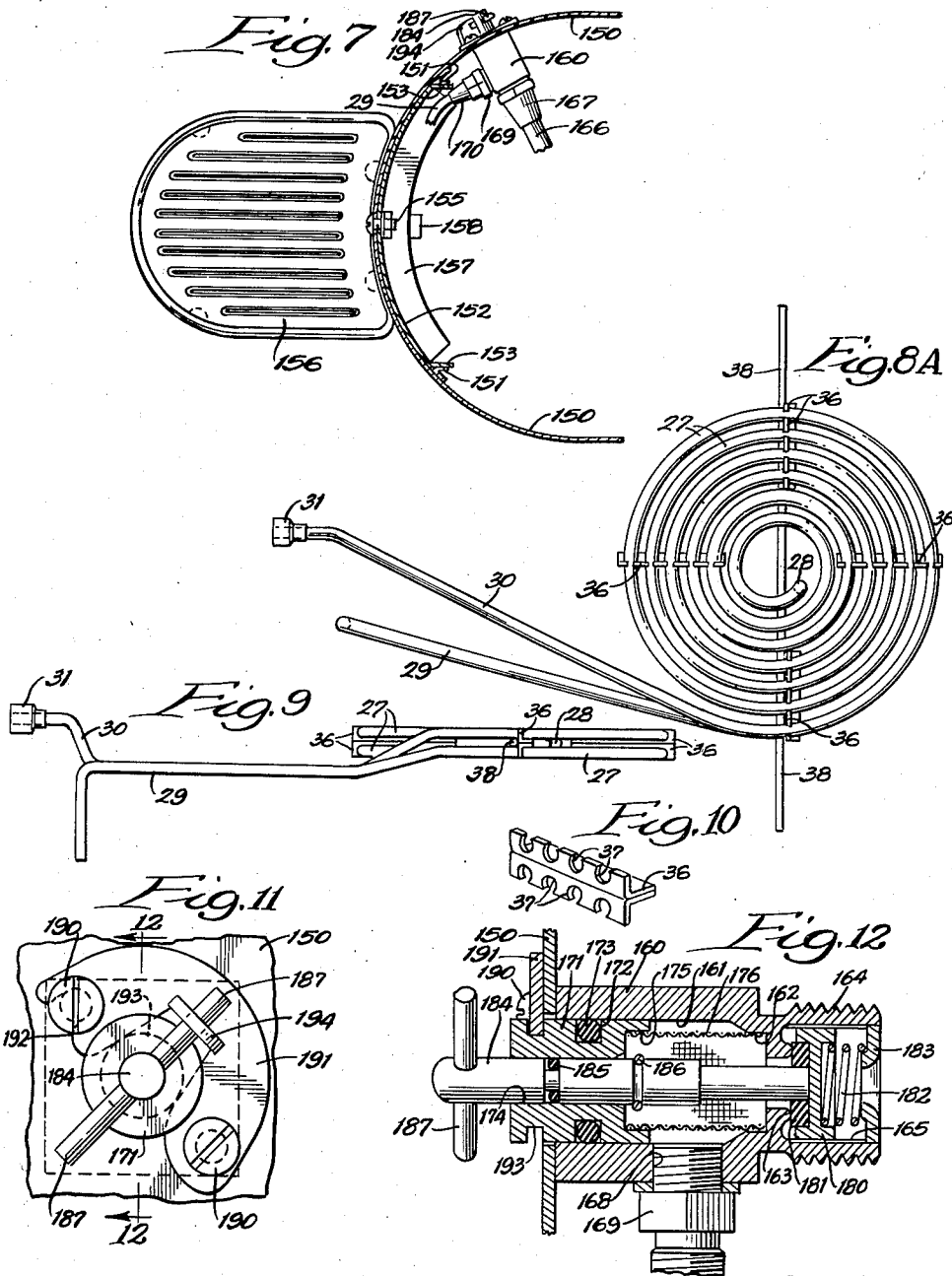
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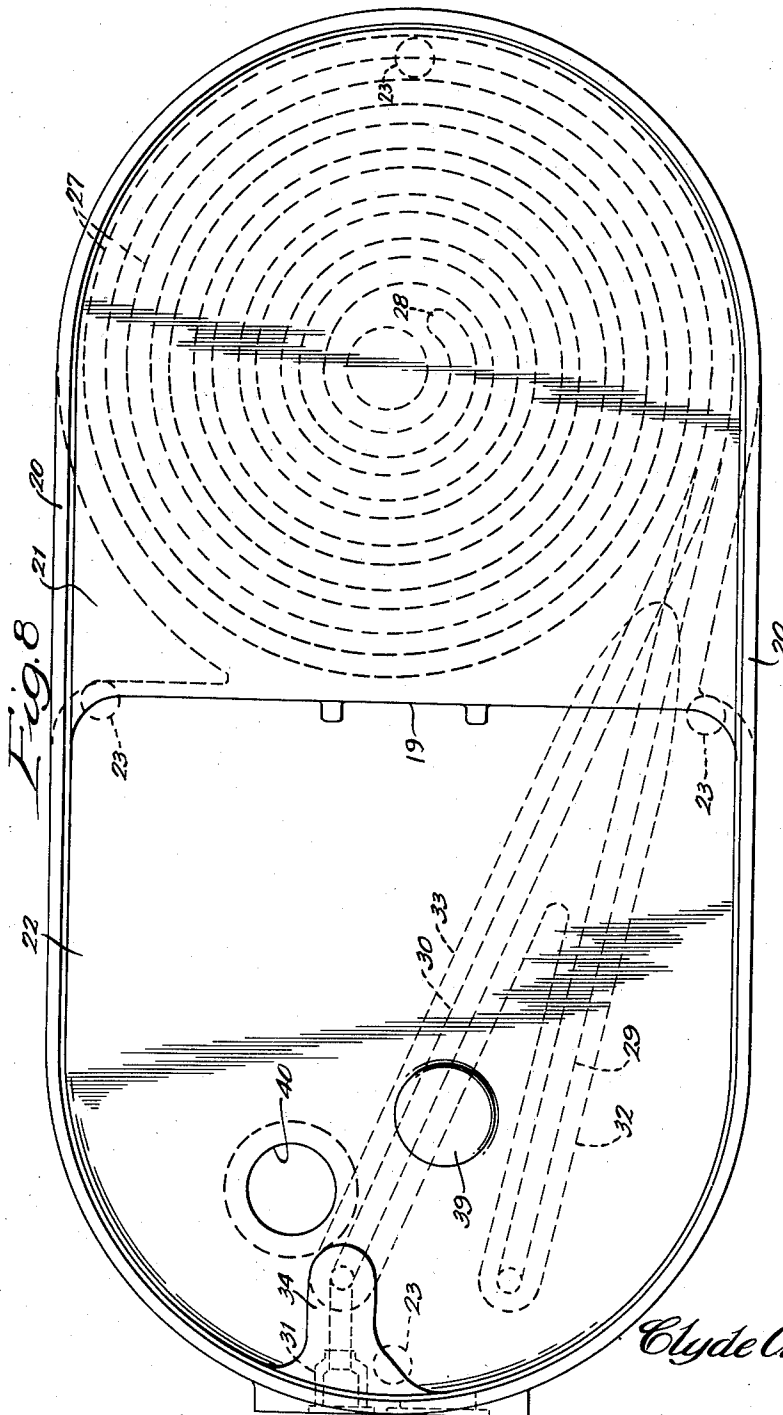
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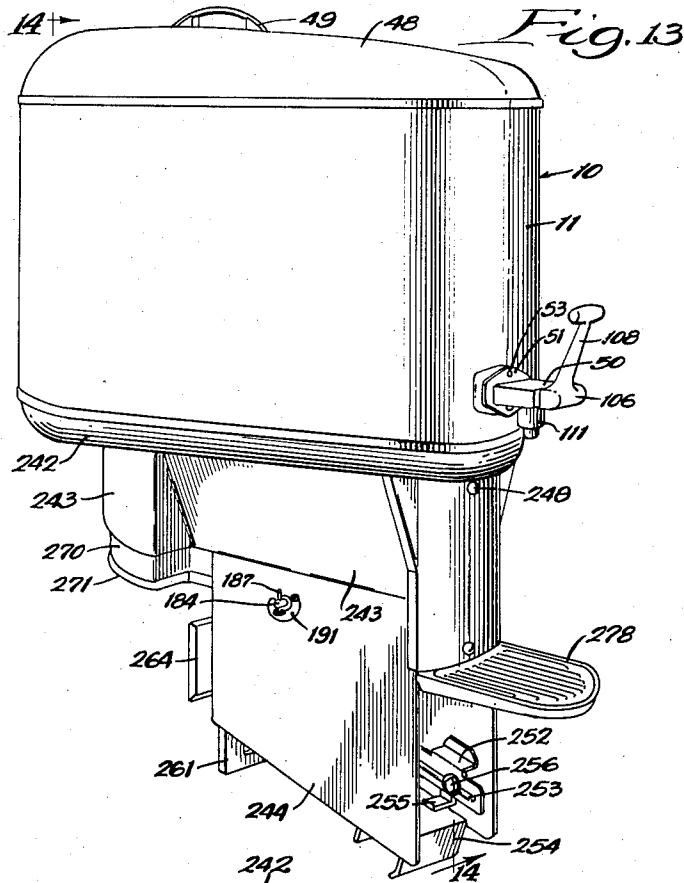
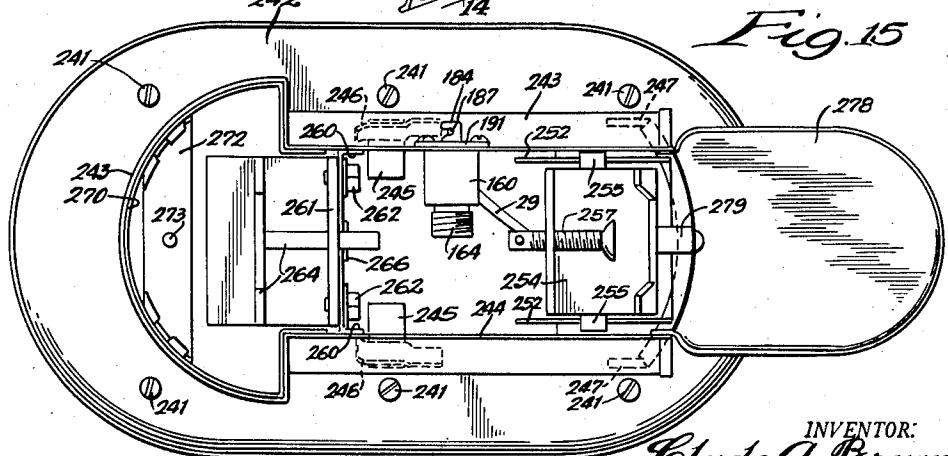
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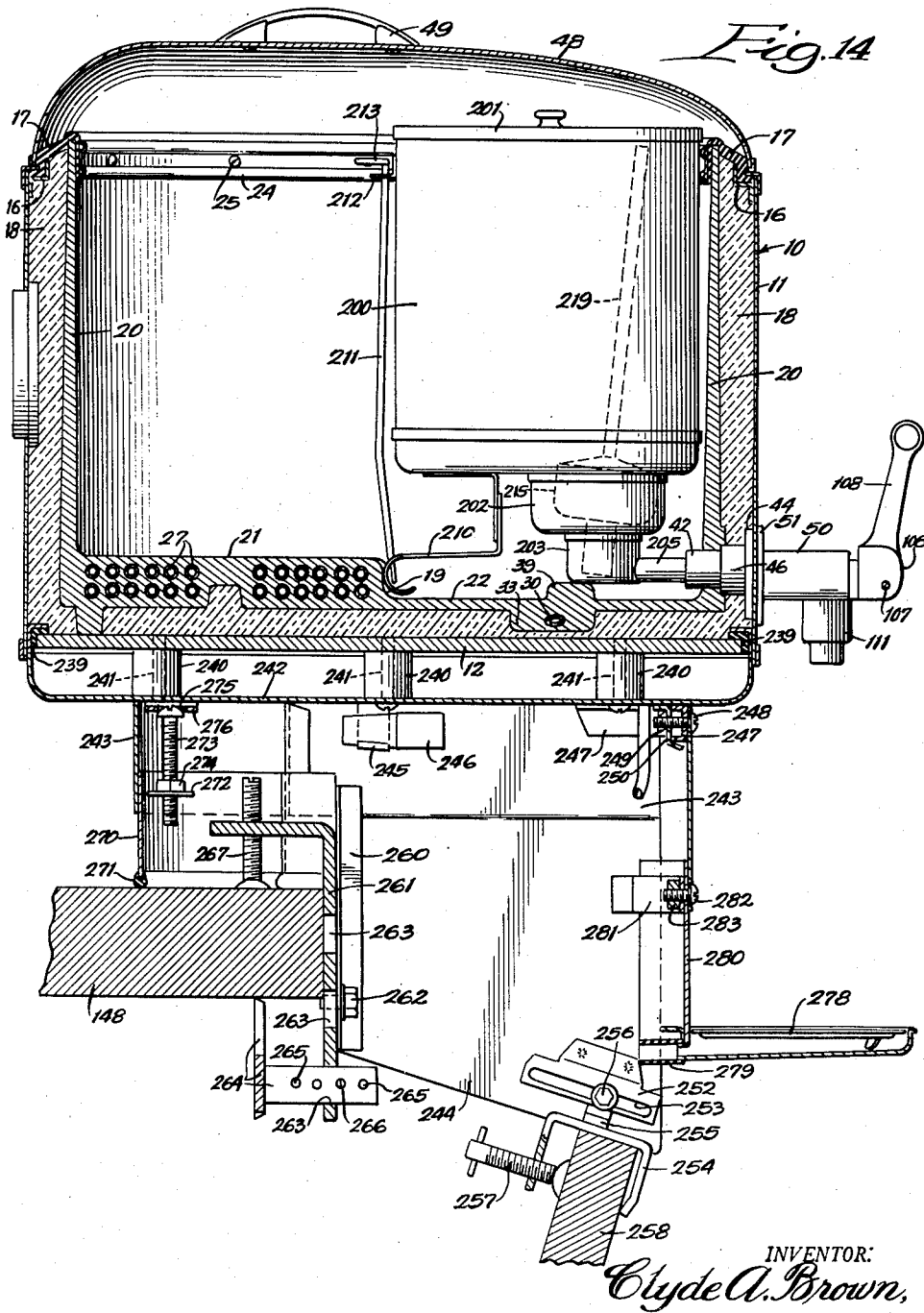
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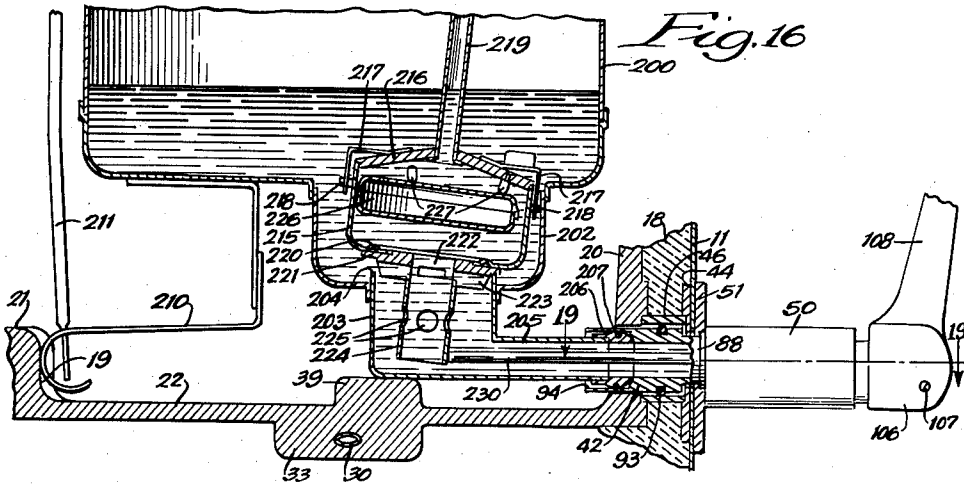
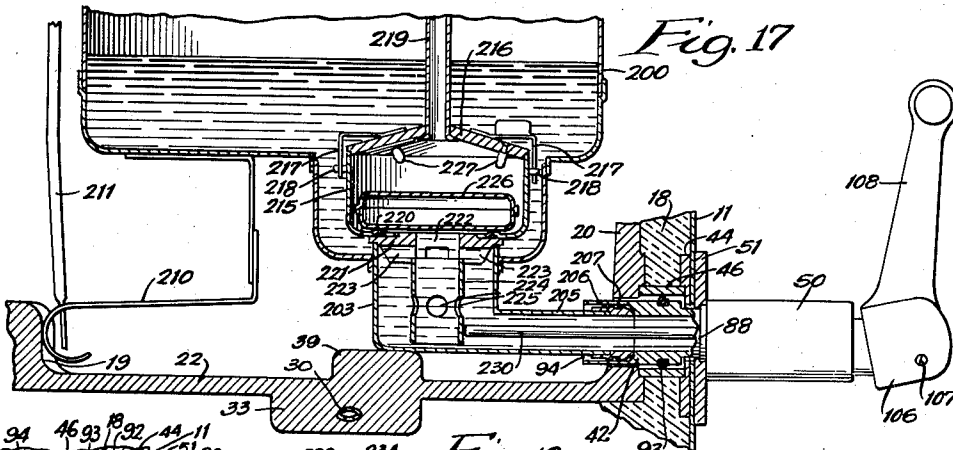
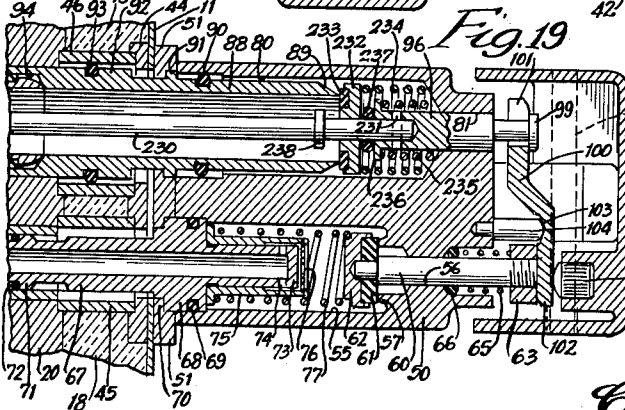
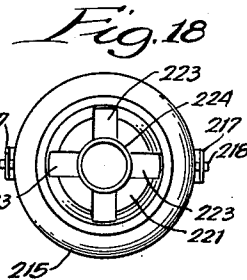
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2,830,737

FOUNTAIN DISPENSERS

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Original application January 4, 1950, Serial No. 136,706, now Patent No. 2,673,005, dated March 23, 1954. Divided and this application January 20, 1954, Serial No. 405,149

5 Claims. (Cl. 222—129.1)

This invention relates to fountain dispensers such as for dispensing mixed drinks consisting of syrup and charged water. This application is a divisional application of my Patent No. 2,673,005 issued March 23, 1954, for Fountain Dispensers.

The principal object of this invention is to provide an improved fountain dispenser for dispensing syrup and charged water which simply and effectively cools the syrup and charged water, which effectively maintains the proper ratio of syrup and charged water in the dispensed mixed drink, which may be securely mounted on substantially any sized fountain bar and syrup rail, which is simple in construction and inexpensively manufactured, and which may readily be disassembled for cleaning purposes.

In carrying out this object of the invention the fountain dispenser preferably includes a cooling unit having a cooling chest for removably receiving a syrup container and having charged water passages formed integrally in the bottom thereof. The cooling chest may also receive ice for cooling the syrup and charged water. The cooling chest is located in an insulated shell which is provided with adjustable mounting means for mounting the same on substantially any sized fountain bar and syrup rail.

The cooling unit is provided with a dispensing valve which is connected by readily releasable connections to the syrup container and charged water passage in the cooling chest for dispensing mixed drinks of syrup and charged water. The construction of the dispensing valve and releasable connections are such that they may be readily completely disassembled and the syrup container readily removed for cleaning purposes.

A flow control valve is preferably provided in the charged water line at the dispensing valve so that the charged water may be dispensed at substantially constant velocity. In one form of the invention the syrup container is provided with a float control so that syrup is also dispensed at a substantially constant velocity. Thus the proper ratio of syrup and charged water in the dispensed mixed drink is assured regardless of the size of the drink dispensed. In another form of the invention the syrup container is provided with a measuring device operated by the dispensing valve so that upon each operation of the dispensing valve a measured quantity of syrup is dispensed. Thus when a given sized mixed drink is dispensed the proper ratio of syrup and charged water therein is provided.

Further objects of this invention reside in the details of construction of the fountain dispenser and the cooperative relationship of the component parts thereof.

Other objects and advantages of this invention will become apparent to those skilled in the art upon reference to the accompanying specification, claims and drawings in which:

Fig. 1 is a perspective view of one form of the fountain dispenser adapted to be mounted on a fountain bar;

Fig. 2 is an enlarged vertical sectional view taken substantially along the line 2—2 of Fig. 1;

Fig. 3 is an enlarged partial vertical sectional view

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taken through the syrup container and the portion of the dispensing valve for dispensing syrup;

Fig. 4 is an enlarged vertical sectional view similar to Fig. 3, but taken through the charged water portion of the dispensing valve;

Fig. 5 is a sectional view taken substantially along the line 5—5 of Fig. 4;

Fig. 6 is an exploded perspective view of the valve elements of the dispensing valve;

Fig. 7 is a sectional view taken substantially along the line 7—7 of Fig. 2;

Fig. 8 is a top plan view of the cooling chest;

Fig. 8A is a top plan view of the cooling tube for the charged water before it is cast into the cooling chest;

Fig. 9 is a side elevational view of the cooling tube illustrated in Fig. 8A;

Fig. 10 is a perspective view of one of the spacing brackets used in Figs. 8A and 9;

Fig. 11 is an end elevational view of a shut off valve for the charged water valve;

Fig. 12 is a vertical sectional view taken substantially along the line 12—12 of Fig. 11;

Fig. 13 is a perspective view of another form of the fountain dispenser adapted to be secured to a syrup rail of a fountain bar;

Fig. 14 is an enlarged sectional view taken substantially along the line 14—14 of Fig. 13;

Fig. 15 is a bottom view of the fountain dispenser of Fig. 13;

Fig. 16 is an enlarged vertical sectional view through the syrup container with the parts in the shut off position;

Fig. 17 is a view similar to Fig. 16 but showing the parts in a dispensing position;

Fig. 18 is a bottom view of the measuring chamber illustrated in Fig. 16; and

Fig. 19 is a horizontal sectional view taken substantially along the line 19—19 of Fig. 16.

Referring first to Figs. 1 to 12 the fountain dispenser for dispensing mixed drinks of syrup and charged water is generally designated at 10. It includes a cooling unit having an outer shell consisting of an outer side wall 11 and a bottom wall 12 which are secured together by screws 13 and an angle strip 14. A gasket 15 forms a support for the cooling unit when it is secured to a fountain bar 148. The upper edge of the side wall 11 is provided with a flanged strip 16 for securing in place a sealing gasket 17. The outer shell is filled with suitable insulating material 18 which operates to insulate a cooling chest formed of a single unit. The cooling chest includes a side wall 20 and a bottom wall having a thick portion 21 and a thin portion 22 with an internal shoulder 19 therebetween. The cooling unit may be supported on the bottom wall 12 of the shell by means of suitable legs 23. A strip 24 and screws 25 secure the sealing gasket 17 to the cooling chest so that the insulation 18 is sealed in place between the outer shell and the cooling chest.

The cooling chest is preferably integrally cast from a metal which may be readily cleaned and which has high heat conductivity such as aluminum. During the casting of the cooling chest a charged water tube 27 is integrally cast into the thick portion 21 of the bottom of the cooling chest. Preferably, this charged water cooling tube is made of stainless steel or the like. The charged water cooling tube is shown in detail in Figs. 8A and 9 and includes a double layer spiral arrangement wherein the two layers communicate with each other by the bent section 28 at the interior of the spirals. Charged water is fed into the cooling tube 27 through an extension 29 and is discharged therefrom through an extension 30 and a fitting 31. The extension 29 is imbedded in an elongated boss 32 and the extension 30 is imbedded in an

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elongated boss 33, both of the bosses being formed on the bottom of the cooling chest. The extension 29 projects downwardly from the boss 32. The extension 30 bends upwardly through a boss 34 within the cooling chest and the fitting 31 communicates with the exterior of the chest adjacent the bottom of the side wall 29. Thus, the tube 27 provides a continuous passage in the bottom wall of the cooling chest and in the illustrated embodiment the fitting 31 provides a discharge opening from the end of the tube.

In casting the charged water cooling tube in the bottom wall of the cooling chest the spiral layers are preferably held in place by four spacer brackets 35 having holes 37 for holding and properly spacing the spiral tube 27. To two of these brackets there is preferably secured a rod 38 for properly locating the spiral layers in position during the casting operation. The wall of the fitting 31 is preferably maintained thick during casting to prevent collapsing of the fitting which might be caused by shrinkage of the aluminum casting. After the casting is completed then the fitting 31 is counterbored to the correct dimension.

The bottom wall of the cooling chest is provided with an upwardly extending boss 39 adapted to support the syrup container and is also provided with a hole 49 there-through in which may be secured a coupling 41 for draining ice water from the cooling chest. When ice is placed within the cooling chest it is evident that heat will be rapidly conducted from the charged water in the cooling tube 27 thereby cooling the same. Thus, the end of the extension 29 of the cooling tube 27 and fitting 31 provide one opening in the side wall of the cooling chest and the side wall adjacent the fitting 31 is provided with an opening 42 therethrough adapted to receive a fitting for the purpose of dispensing syrup.

The shell 11 is provided with a pair of holes 43 and 43', see Figs. 3 and 4, and has a plate 44 secured thereto adjacent the fitting 31 and the opening 42. Plate 44 has a pair of openings therein aligned with the holes 43 and 43' and openings in the side wall of the chest and is so shaped as to receive a pair of sleeves 45 and 46 to form communicating passages between the cooling chest and shell. The cooling unit may be provided with a suitable removable cover 48 having a handle 49 to provide access to the interior of the cooling chest.

A dispensing valve for dispensing syrup and charged water is secured to the exterior of the cooling unit adjacent the fitting 31 and opening 42 in the cooling chest. This dispensing valve includes a valve housing 50 secured by screws 52 to a mounting flange 51. The mounting flange 51 is in turn secured by screws 53 to the plate 44 whereby the valve housing is securely mounted on the cooling unit.

The valve housing is provided with a pair of parallel bores extending longitudinally therethrough. One of the bores for the purpose of dispensing charged water includes a valve bore 55, a valve guide 56 and a valve seat 57 therebetween. The valve bore adjacent the seat 57 communicates through a lateral passage 58 with a tortuous passage 59 extending downwardly from the valve housing 50 as is illustrated in Fig. 5. The tortuous passage is formed by screwing a plug having coarse threads into a screw threaded opening wherein the threads seat loosely to provide a helical passage. A valve stem 60 is slidably mounted in the valve guide 56 and carries at its interior end a valve head 62 having a valve member 61 adapted to engage the seat 57. The outer end of the valve stem is secured to an abutment 63 having a horizontal notch 64. A spring 65 engaging the abutment 63 operates to hold in place a resilient O-ring 66 about the valve stem 60 for sealing the same against leakage.

A ported member 67 located within the valve bore 55 has an enlarged portion 68 provided with a groove for receiving a resilient O-ring 69. The enlarged portion 68 is slidably received in the valve bore 55 and the O-ring 69

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operates to seal the same against leakage. The enlarged portion 68 engages against an abutment 70 in the mounting flange 51 for maintaining the ported member 67 within the valve housing. The ported member extends through the sleeve 45 and into the fitting 31. The outer end of the ported member 67 is enlarged at 71 and is provided with a groove for receiving an O-ring 72 for sealing the ported member within the fitting.

The inner end of the ported member 67 is closed by a wall 73 and is provided with lateral holes 74. A cup shaped member 75 overlies the inner end of the ported member 67 and is slidable thereover. The inner end of the cup shaped member is provided with a restricted opening 76. The cup shaped member has an internal valving edge for coacting with the holes 74 for regulating the flow of charged water therethrough. A spring 77 urges the valve member 61 against its seat 57 and urges the cup shaped member outwardly as is illustrated in Fig. 4.

With the parts in the position shown in Fig. 4 the pressure of the charged water on opposite sides of the cup shaped member is equal and the spring 77 maintains the cup shaped member in the position shown in Fig. 4. When, however, the valve stem 60 is depressed to move the valve element 61 away from the valve seat 67 the pressure on the outside of the cup shaped member decreases whereupon the spring 76 is compressed and the cup shaped member moves inwardly. This movement is provided by the restricted opening 76 which produces a pressure drop thereacross. The valving edge of the cup shaped member cooperates with the holes 75 for controlling the flow of charged water from the ported member to maintain a substantially constant pressure drop across the ported end of the cup shaped member 75. In this way charged water is regulated to substantially constant rate of flow. When the valve stem 60 is released and the valve element 61 is moved into engagement with the valve seat 57, the pressure drop across the ported end of the cup shaped member 75 becomes zero and the spring 77 returns the cup shaped member to the position illustrated in Fig. 4. Thus, when charged water is dispensed upon opening of the valve, it is dispensed at a substantially constant velocity.

The other parallel bore in the valve housing 50 includes a valve bore 80 and a valve guide 81. The valve bore 80 communicates with a passage 82 in which is secured a short tube 83 having a thin plate 84 at its lower end secured in place by a collar 86. The thin plate 84 is provided with an opening 85 through which syrup is dispensed.

Slidably received in the valve bore 50 is a ported member 88 having a valve seat 89 on its inner end. The ported member 88 is provided with a groove for receiving a resilient O-ring 90 for sealing the ported member in the valve bore. The ported member is provided with a shoulder 91 fitting in a recess in the mounting flange 51 for securing the ported member within the valve bore. The ported member is provided with an enlargement 92 which is provided with a groove for receiving a resilient O-ring 93 for sealing the same within the sleeve 46. The enlarged portion 92 at its outer end is also provided with an enlarged opening 94.

A valve stem 96 is slidably received in the valve guide 81 and carries at its inner end a valve head 97 having a valve member 98 adapted to engage against the valve seat 89. A spring 99 urges the valve member 98 against the valve seat 89. The outer end of the valve stem 96 is provided with a head 105. The bifurcated end 101 of a lever 100 engages underneath the head 105. Intermediate its ends the lever 100 is provided with a recess 103 by means of which the lever 100 is pivotally mounted on a pin 104 carried by the outer end of the valve housing 50. The other end of the lever 100 is provided with an extension 102 which is received in the horizontal groove 64 of the other valve element.

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A handle housing 106 is pivoted by a transverse pin 107 to the outer end of the valve housing 50 and is provided with an operating handle 108. Located within the handle housing 106 is a pin 109 which is adapted to engage the extension 102 of the lever 100. When the handle 108 is pushed inwardly the pin 109 pushes inwardly against the extension 102 of the lever 100. This causes opening of the charged water valve as heretofore explained. This also causes the lever 100 to pull the valve stem 96 outwardly against the action of the spring 99 so that the valve member 98 is moved away from the valve seat 89. This permits syrup to pass through the valve seat into the tube 83 and hence through the opening 85 in the lower end thereof. When the handle 108 is returned to its original position the charged water valve is closed as heretofore explained and the spring 99 moves the valve member 88 against the valve seat 89 to shut off the flow of syrup.

The bottom side of the valve housing 50 is provided with a circular opening for receiving a spout 111. The spout 111 encompasses the syrup tube 83 and is held in place by a bayonet connection 112. A resilient O-ring 113 seals the spout in the opening. When the dispensing valve is opened syrup flows into the center of the spout through the syrup tube 83 and charged water flows into the spout through the tortuous passage 59. The syrup and charged water are mixed within the spout 111 as the same is dispensed. Vanes 114 formed in the spout 111 assist in the mixing of the syrup and charged water. Thus, the dispensing valve dispenses a mixture of syrup and charged water.

Removably located within the cooling chest is a syrup container 120 having a float chamber 121 in the bottom thereof. The float chamber is provided with a depression 122 which communicates with a syrup tube 123 having a fitting 124 on its outer end. The fitting 124 is provided with a groove for receiving a resilient O-ring 125 whereby the fitting may be slidably received in and sealed in the enlarged opening 94 in the ported member 38. The depression 122 of the float chamber 121 is adapted to rest on the boss 39 on the bottom wall of the cooling chest so as to support the syrup container in the cooling chest with the syrup tube 123 in communication with the ported member 88. A spring latch 127 is secured to the bottom of the float chamber 121 and engages the shoulder 91 on the bottom wall of the cooling chest for the purpose of firmly holding the syrup tube 123 in communicating engagement with the ported member 88. A link 128 engages the spring latch 127 and is guided at its upper end by a bracket 129 secured to the syrup container 120. A handle 130 is located on the upper end of the link 128 so that when the handle 130 is pulled the spring latch 127 is released to permit removal of the syrup container from the cooling chest. The link 128 also operates firmly to latch the spring latch member 127 against the shoulder 119 for holding the syrup container in place. Thus, the syrup container may be readily removed from the cooling chest and may be readily supported within the cooling chest in a leak proof manner. The top of the syrup container 120 may be closed by a suitable cover 132 having a handle 133.

A removable wall separates the float chamber 122 from the remainder of the syrup container. This removable wall includes a disc 135 covered with a resilient material 136 such as rubber. The resilient material seals the float chamber 121 from the syrup container 120 and thereby provides a removable partition therebetween. The wall or partition is provided with a central opening 137 and also with an upwardly extending vent tube 138.

Located within the float chamber 131 is a float 139 having a valve element 140 cooperating with the opening 137 for regulating the flow of syrup from the syrup container 120 into the float chamber 121. The float is

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guided in the float chamber by means of guide members 141 depending from the removable wall or partition 135.

The valve element 140 of the float 139 when in the upper position as illustrated in Fig. 3 closes the opening 137 to maintain a predetermined level of syrup within the float chamber. When the dispensing valve is opened to dispense syrup and charged water, syrup is withdrawn from the float chamber. When this occurs the float 139 moves downwardly to permit additional syrup to enter the float chamber from the syrup container and this will continue until the level of the syrup in the float chamber 121 is restored to the original value. Thus, the float 139 operates to maintain a substantially constant head or level of syrup within the float chamber. In this way when syrup is dispensed through the dispensing valve it is dispensed at substantially a constant velocity since the head of the syrup remains substantially constant. Hence in accordance with this form of the invention both the syrup and the charged water are dispensed at constant velocity during the dispensing operation so that a predetermined mixture of syrup and charged water is assured regardless of the size of the mixed drink dispensed. The vent tube 138 maintains atmospheric pressure above the syrup in the float chamber 121.

A clamping bracket 145 is secured to the bottom wall 12 of the cooling unit by means of screws 146. The clamping bracket 145 carries a screw clamp 147 for the purpose of securely mounting the cooling unit on a fountain bar 148 with a portion of the cooling unit overhanging the fountain bar. The gasket 15 seals the cooling unit to the fountain bar. A depending skirt 150 is suitably secured to the overhanging portion of the outer shell of the cooling unit and it is internally provided with a pair of guide brackets 151. A hanger 152 is received within the skirt 150 and is provided with flanges 153 engaging the guide brackets 151 so that it may be vertically adjusted with respect to the skirt. The hanger is provided with a vertical slot 154 for receiving a screw and nut assembly 155 adjustably to position the hanger vertically with respect to the skirt. The hanger carries a hollow tray 156 provided with a reinforcing flange 157 and a spout 158. Any liquid which is spilled into the tray 156 is conveyed therefrom by the spout 158. A suitable disposal tube, not shown, may be secured to the spout 158.

The skirt 150 also carries a charged water shut off valve having a housing 160. The valve housing 160 is provided with an internal bore 161 and a shoulder 162. The valve housing also includes a valve seat 163 and a threaded extension 164, which extension is provided with longitudinal internal grooves 165. The threaded extension 164 is adapted to be coupled by a suitable coupling 167 to a charged water supply line 166. The side wall of the valve housing 160 is provided with a screw threaded opening 168 for receiving a nipple 169 to which is secured the cooling tube extension 29 by means of a fitting 170.

Within the bore 161 of the valve housing 160 there is slidably received a member 171 having a groove 172 for receiving a resilient O-ring 173 which operates to seal the member 171 in the valve housing 160. The member 171 is provided with a central valve guide 174. It is also provided with an internal shoulder 175 for the purpose of supporting a cylindrical screen 176 between it and the shoulder 162. Thus, charged water passing through the shut off valve must pass through the cylindrical screen 176.

Slidably mounted within the screw threaded extension 164 is a valve head 180 carrying a valve member 181 adapted to engage the valve seat 163. A spring 182 located between the valve head 180 and a ported partition 183 secured in the threaded extension urges the valve

member 181 against the seat 163. A valve stem 184 is slidably and rotatably received in the valve guide 174 and it is provided with a groove for receiving a resilient O-ring 185 for sealing the same. A spring ring 186 prevents removal of the valve stem. The inner end of the valve stem 184 engages the valve head 180 and when the valve stem is pushed inwardly the valve member 181 is moved away from the valve seat 163 against the action of the spring 182. Charged water passes around the valve head 180 through the longitudinal grooves 165 and then past the valve seat and through the screen 176. When the valve stem 184 is released the spring 182 moves the valve member 181 against the valve seat 163 to shut off the flow of charged water. The outer end of the valve stem 184 is provided with a handle 187 for manipulating the valve stem.

The valve housing 160 is secured to the skirt 150 by means of a pair of screws 190. A generally U-shaped plate 191 is secured in place by the same screws 190, one screw 190 passing through a hole in the plate 191 and the other screw 190 passing through a slot in the plate 191. The plate 191 engages in a groove 193 in the member 171 for locking the member in position. The plate 191 is also provided with a hook 194 under which the handle 187 may be hooked. To open the shut off valve the valve stem 184 is pushed inwardly and the handle rotated underneath the hook 194 whereby the valve stem 184 is held inwardly. To close the shut off valve the handle 187 is rotated from underneath the hook 194 and then the valve stem 184 is pushed outwardly by the spring 182. In order to disassemble the valve for cleaning purposes, the plate 191 is rotated out of the position shown in Fig. 11. This being permitted by the slot 192. The plate 191 is thus moved out of engagement with the groove 193 in the member 171 whereby the member 171, the valve stem 184 and the screen 176 may be removed from the valve housing.

The form of the invention illustrated in Figs. 13 to 19 is substantially the same as the form of the invention illustrated in Figs. 1 to 12 and like reference characters have been utilized for like parts. This form of the invention differs from the form of the invention previously described in two essential respects. One is in the manner of dispensing the syrup and the other is in the manner of mounting the cooling unit on the fountain bar.

Considering first the first difference, the syrup container is designated at 200 and is provided with a suitable cover 201. The bottom of the syrup container has an auxiliary chamber 202 in which is secured an extension 203, the upper edge of the extension 203 forming a seat 204. The extension 203 communicates with a syrup tube 205 provided at its end with a fitting 206 carrying a resilient O-ring 207. The fitting 206 is slidably received in the enlarged opening 94 of the ported member 42 so that the syrup tube may be removably received therein. The extension 203 rests upon the boss 39 for supporting the syrup container. A spring latch 210 is secured to the bottom of the syrup container 200 and engages the shoulder 19 of the cooling chest for securing the same in place. Here again the spring latch member 210 is manipulated by a link 211 and handle 213 guided by a bracket 212.

Movably located within the auxiliary chamber 202 is a measuring chamber 215 having a cover 216. The cover is secured in place by spring arms 217 and pins 218. The cover is provided with a vent tube 219 extending upwardly therefrom. The measuring chamber 215 is provided with an internal seat 220. The bottom of the measuring chamber 215 is provided with a plate 221 for engaging the seat 204 formed by the upper edge of the extension 203. The plate 221 is provided with a central opening 222. The bottom of the plate 221 is provided with lateral projections 223 in the form of a spider for carrying a sleeve 224 having openings 225 therein. The lateral projections 223 operate to guide the measuring

chamber 215 with respect to the extension 203. Located within the measuring chamber 215 is a float 226 which in its downward position engages the seat 220 to seal off the central opening 222 and which in its upper position engages stops 227 carried by the cover 216 of the measuring chamber.

A rod 230 extends inwardly through the syrup tube 205 and is adapted to engage the lower end of the sleeve 224 to tilt it to the position shown in Fig. 16 or to allow it to become vertically positioned as illustrated in Fig. 17. The outer end of the rod 230 is secured to the valve stem 96 by a pin 231. A valve head 232 is slidably mounted on the rod 230 and carries a valve member 233 adapted to engage the seat 89 of the ported member. A spring 234 urges the valve member 233 against the seat 89 and a spring 235 urges the valve stem 96 inwardly. A resilient O-ring 237 is located between the valve head 232 and the valve stem 96 to limit the inward movement of the valve stem 96. The rod 230 is provided with a shoulder 238 adapted to engage the valve head 232 for moving the valve member 233 away from the valve seat 89 against the action of the spring 234.

When the dispensing valve is closed, as illustrated in Figs. 16 and 19, the rod 230 maintains the measuring chamber 215 in the tilted position, syrup fills the syrup tube 205 and the extension 203 and also enters through the central opening 222 to fill the measuring chamber 215 whereupon the float 226 is in the raised position as illustrated in Fig. 16. When the dispensing valve is opened the valve stem 96 is moved outwardly to pull the rod 230. When this occurs the measuring chamber 215 moves to the vertical position as illustrated in Fig. 17 and the plate 221 seals against the valve seat 204 to prevent syrup from being discharged from the syrup container 200. When the rod 230 is retracted the shoulder 238 engages the valve head 232 to move the valve member 233 away from the seat 89 so that syrup may be dispensed. When this occurs syrup flows from the measuring chamber 215 through the central opening 222 until the float 226 engages the seat 220. When this occurs the flow of syrup is stopped even though the valve member 233 is away from the valve seat 89. Thus, a measured quantity of syrup determined by the syrup contained in the measuring chamber 215 is dispensed. When the dispensing valve is closed the valve member 233 engages the valve seat 89 to prevent further discharge of syrup and the rod 230 tilts the measuring chamber 215 to the position illustrated in Fig. 16 whereby syrup enters through the central opening 222 to refill the measuring chamber 215. Refilling and emptying of the measuring chamber 215 is permitted by means of the vent tube 219. Thus, in accordance with this form of the invention when the dispensing valve is opened a measured quantity of syrup is dispensed.

The cooling unit of the form of the invention illustrated in Figs. 13 to 19 is illustrated to be mounted on the syrup rail of a fountain bar. In this connection the outer shell of the cooling unit has secured thereto a bottom plate 242 which supports through spacers 240 and screws 241 the bottom wall 12. A sealing gasket 239 seals the bottom wall 12 to the cooling unit. The bottom plate 242 carries a depending skirt 243 having a pair of downwardly extending parallel extensions 244. A pair of clips 245 secured to the bottom plate 242 receive tongues 246 carried by the skirt 243 for the purpose of securing the cooling unit to the skirt. A bracket 247 is also secured to the skirt 243 and a cooperating bracket 250 is secured to the bottom plate 242. A screw 248 and a nut 249 clamp the two brackets together. In mounting the cooling unit on the skirt the cooling unit is slid forwardly with respect to the skirt to cause the clamps 245 to engage the tongues 246 and to cause the bracket 250 to engage the bracket 247. The screw 248 and nut 249 securely hold the cooling unit on the skirt. Thus, the cooling unit is detachably carried by the skirt.

On each extension 244 there is secured a bracket 252 each having an elongated slot 253 for the purpose of adjustably mounting a U-shaped clamp member 254. In this connection the clamp member 254 is provided with a pair of brackets 255 adjustably secured in place along the slots 253 by screws 256. The clamp member 254 carries a screw threaded clamp screw 257 for the purpose of securing the skirt to a syrup rail 258.

The extensions 244 of the skirt 243 also carry a pair of brackets 260 for adjustably mounting a clamping member 261. The brackets 260 and the clamping member 261 are provided with a plurality of spaced holes for receiving screws 262 so that the clamping member 261 is vertically adjustably secured to the brackets 260. The clamping member 261 is also provided with a plurality of holes 263 for receiving an arm of a clamp 264. The arm is provided with a plurality of holes 265 adapted to receive pins 266 for adjustably positioning the clamp 264 with respect to the clamping member 261. The clamp 264 is adapted to engage the under side of a fountain bar 148. The clamping member 261 also carries a screw threaded clamping screw 267 for also engaging the fountain bar 148. Thus the skirt 243 is provided with adjustable mounting devices for securing the skirt to the syrup rail 258 and the fountain bar 148. The skirt by reason of the adjustable mounting devices may be mounted on substantially any syrup rail and fountain bar regardless of the sizes and shapes thereof.

To fill the space between the skirt 243 and the top of the fountain bar 148 there is provided a vertically adjustable shield 270 having a gasket 271 for engaging the upper surface of the fountain bar. The shield 270 conforms in configuration to the interior of the skirt 243 and is guided for vertical adjustment thereby. The shield carries a transverse strip 272 having an opening for receiving a screw 273. A nut 274 carried by the screw rests against the upper surface of the strip 272. The head of the screw engages in an opening 275 in another strip 276 carried by the skirt 243. By manipulating the screw 273 through the opening 275 the shield 270 may be clamped firmly against the top surface of the fountain bar.

The skirt 243 also vertically adjustably carries a hollow tray 278 having a spout 279 to which may be secured a hose, not shown, for collecting liquids spilled into the tray. The tray is carried by a hanger 280 which is guided by a strip 281 secured to the skirt 243. The hanger 280 is provided with a vertical slot for receiving a screw 282 and a nut 283 whereby the hanger and hence the tray may be clamped in the desired vertical adjustable position.

While for purposes of illustration two forms of this invention have been disclosed, other forms thereof may become apparent to those skilled in the art upon reference to this disclosure, and therefore, this invention is to be limited only by the scope of the appended claims.

I claim:

1. In a fountain dispenser for syrup and charged water, a cooling chest comprising a single piece cast aluminum body having a continuous bottom wall and angularly extending side wall forming a receptacle adapted to receive therein a syrup container and a cooling medium, and a continuous stainless steel tube cast in the bottom wall of the body and entering the body at the bottom wall thereof and leaving the body at the side thereof and adapted to convey charged water therethrough.

2. In a fountain dispenser for syrup and charged water, a shell having a bottom wall and a side wall and a pair of adjacent holes in the side wall thereof, a cooling chest within and spaced from the shell and having a bottom wall and a side wall and adjacent syrup and charged water openings in the side wall in alignment with the holes in the shell and adapted to receive a cooling medium for cooling syrup and charged water, thermal insulation between the shell and the chest, a

pair of sleeves bridging the holes in the shell and the syrup and charged water openings in the chest, a syrup and charged water dispensing valve secured to the exterior of the shell and having a pair of ported members projecting therefrom through the sleeves for conveying syrup and charged water to the dispensing valve, and packing means for preventing leakage around the ported members.

3. In a fountain dispenser for syrup and charged water, a shell having a bottom wall and a side wall and a pair of adjacent holes in the side wall thereof, a single piece cooling chest within and spaced from the shell having a bottom wall and a side wall adapted to receive a cooling medium therein and having a syrup opening in the side wall thereof in alignment with one of the holes in the side wall of the shell, a continuous passage formed in the bottom wall of the chest and entering at the bottom wall thereof and leaving at the side thereof at an opening in alignment with the other hole in the shell and adapted to convey charged water therethrough, thermal insulation between the shell and the chest, a pair of sleeves bridging the holes in the shell and the syrup and charged water openings in the chest, a syrup container removably secured in the chest and having a syrup tube projecting laterally therefrom toward the syrup opening in the side wall of the chest, a syrup and charged water dispensing valve secured to the exterior of the shell and having a pair of ported tubular members extending through the sleeves, one of said tubular members projecting into the continuous passage in the bottom wall of the chest for conveying charged water to the dispensing valve, the other tubular member projecting into the chest and telescopically receiving the syrup tube for conveying syrup to the dispensing valve.

4. In a fountain dispenser for syrup and charged water in combination, a shell having a bottom wall and a side wall, a single piece cast-metal cooling chest within said shell adapted to receive a cooling medium therein and having a side wall and relatively thick bottom wall, a cooling coil cast substantially wholly in the bottom wall of said cooling chest, said cooling coil having an inlet opening at the bottom of said chest and a discharge opening at the side of said bottom wall, said shell having an opening in registry with the discharge opening of said cooling coil, a layer of thermal insulation between the shell and the chest, a sleeve bridging said shell opening and said discharge opening, a metal dispensing valve mounted on the exterior of said shell, said valve having a metal ported member for conveying charged water to said valve and extending through said sleeve and a substantial distance into said discharge opening, whereby said valve is cooled by conduction of heat therefrom to said bottom wall of said cooling chest.

5. In a fountain dispenser for syrup and charged water, a cooling chest comprising a single-piece cast metal body having a continuous bottom wall and angularly extending side wall forming a receptacle adapted to receive therein a syrup container and cooling medium, a continuous tube cast in the bottom wall of the body, a hollow fitting at one end of the tube cast in the body and extending to the outer surface at one side thereof, a shell enclosing the bottom and side walls of the cast body in spaced relation thereto and having an opening in one side in alignment with the fitting, a sleeve between the opening in the shell and fitting, a dispensing valve mounted on said shell and having a ported stem extending through the opening in the shell and the sleeve into the fitting, and thermal insulation in the space between the cast body and shell.

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