United States Patent [19]

Martin et al.

[11] **3,822,716**

[45] **July 9, 1974**

[54] **BEVERAGE TAPPING DEVICE**

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[73] Assignee: **GMF Inc.,** Cleveland, Ohio

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[52] **U.S. Cl.**..... **137/212,** 222/400.7, 137/614.06

[51] **Int. Cl.**..... **B65d 83/00**

[58] **Field of Search**..... 137/212, 614.06; 222/400.7; 285/382.7, 319; 251/317

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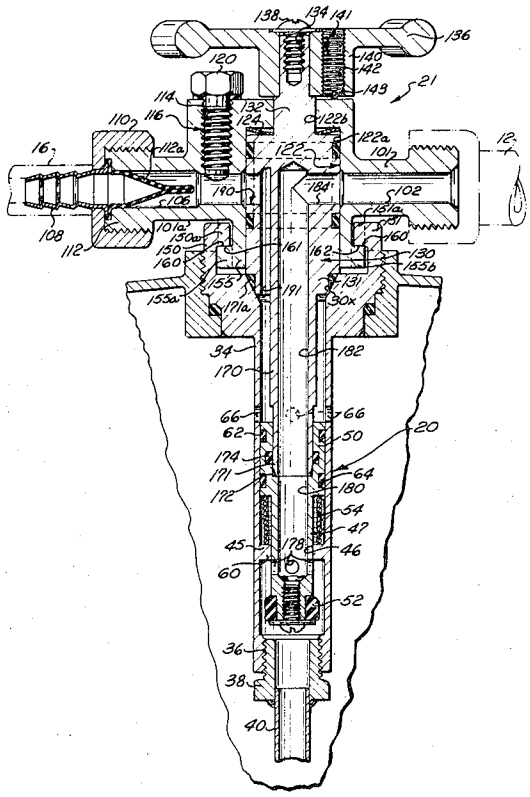
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Primary Examiner—Alan Cohan

[57] **ABSTRACT**

Apparatus for tapping a container comprising a container valve unit secured to the container. The container valve unit includes a fluid-dispensing passage and a self-closing valve with a fluid-dispensing passage, and which valve has a closed position blocking fluid flow therethrough. A tapping unit cooperates with the container valve unit and effects opening of the self-closing valve of the container valve unit when locked thereto by a bayonet connection. The tapping unit has a passageway for receiving fluid from the container valve unit and an outlet for directing fluid therefrom to the use location. A valve means controls the flow of fluid from the tapping unit outlet and closes prior to disconnection of the tapping unit from the container valve unit.

3 Claims, 8 Drawing Figures



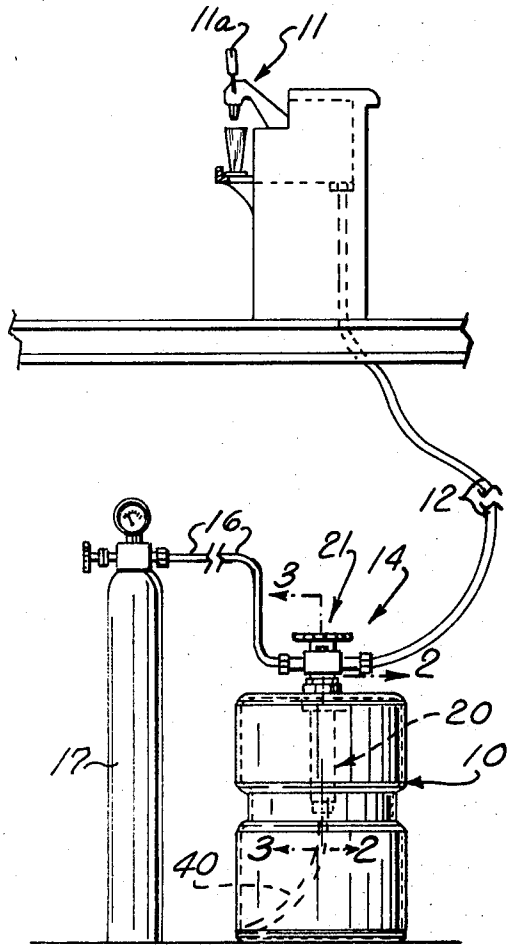

11a
11
12
16
21
14
3
2
20
10
17
40

FIG. 1

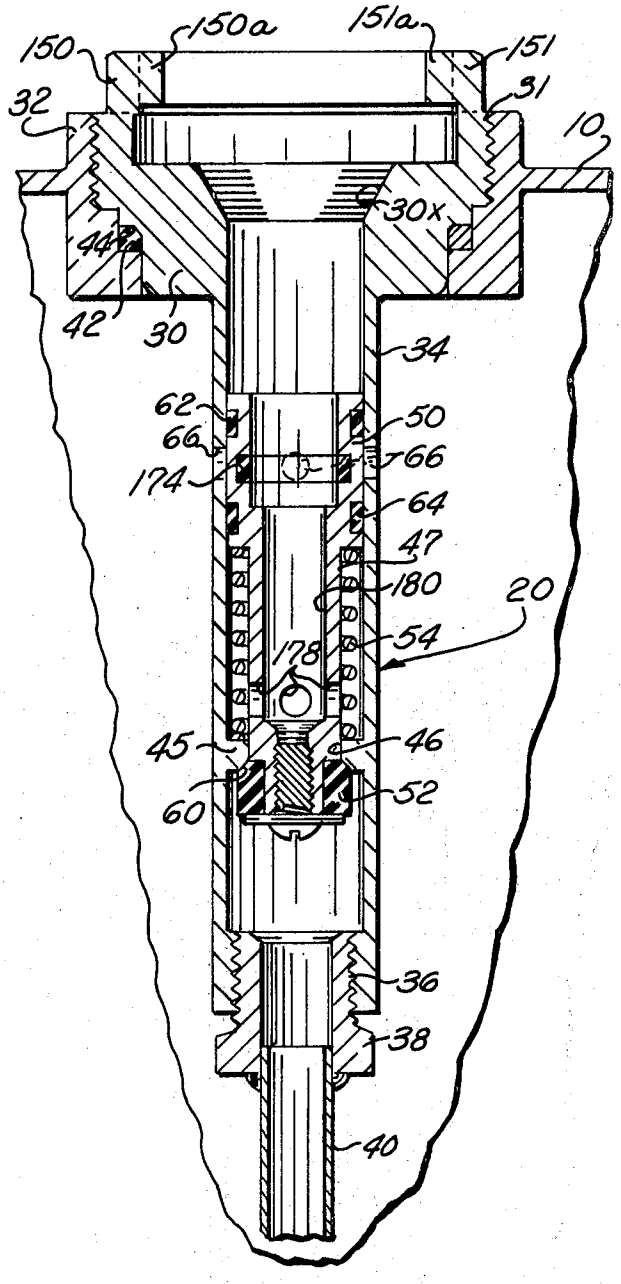

150
150a
151a
151
31
32
10
30x
44
42
30
34
62
66
174
50
66
64
47
180
20
54
178
45
46
60
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40

FIG. 2

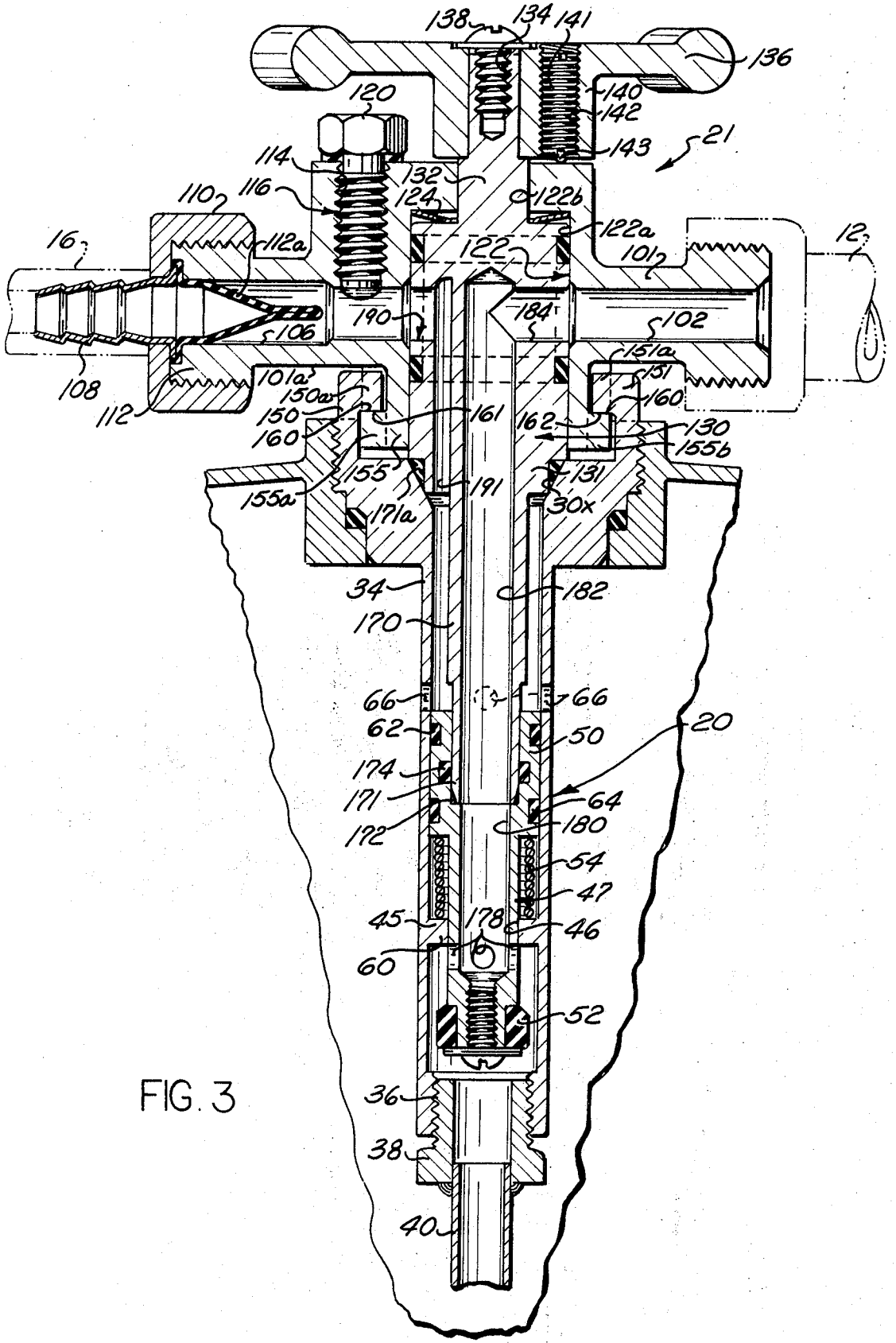

138
134
141
136
120
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21
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132
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124
122b
110
122a
16
112a
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101
12
190
184
102
106
151a
151
108
101a
150a
160
112
150
161
162
130
160
155b
155
131
155a
191
30x
171a
34
182
170
66
66
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64
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180
172
54
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178
46
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52
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38
40

FIG. 3

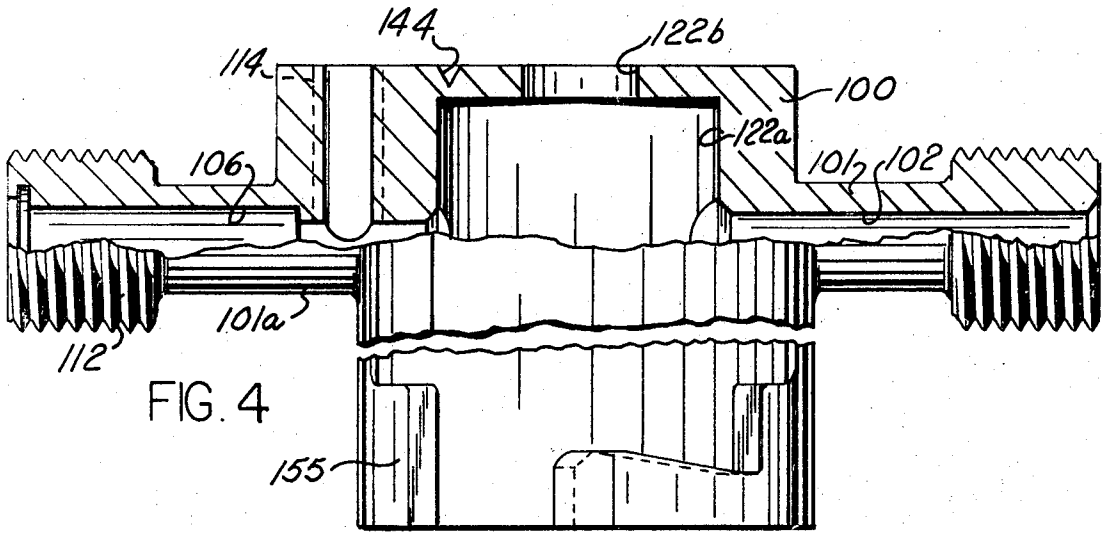


FIG. 4

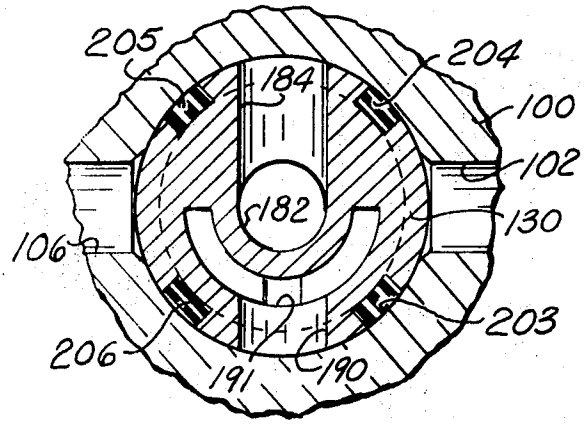


FIG. 5

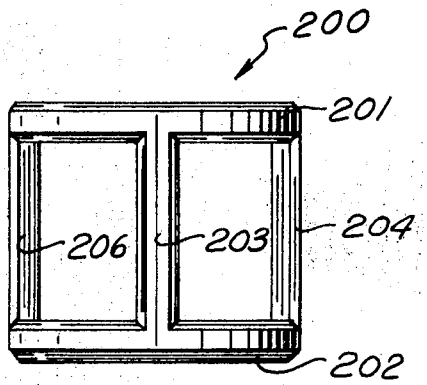


FIG. 6

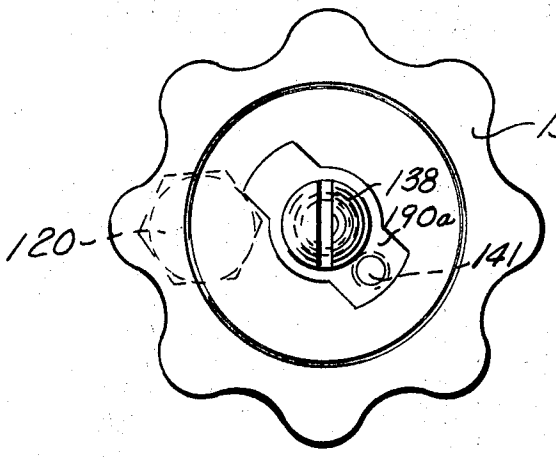


FIG. 7

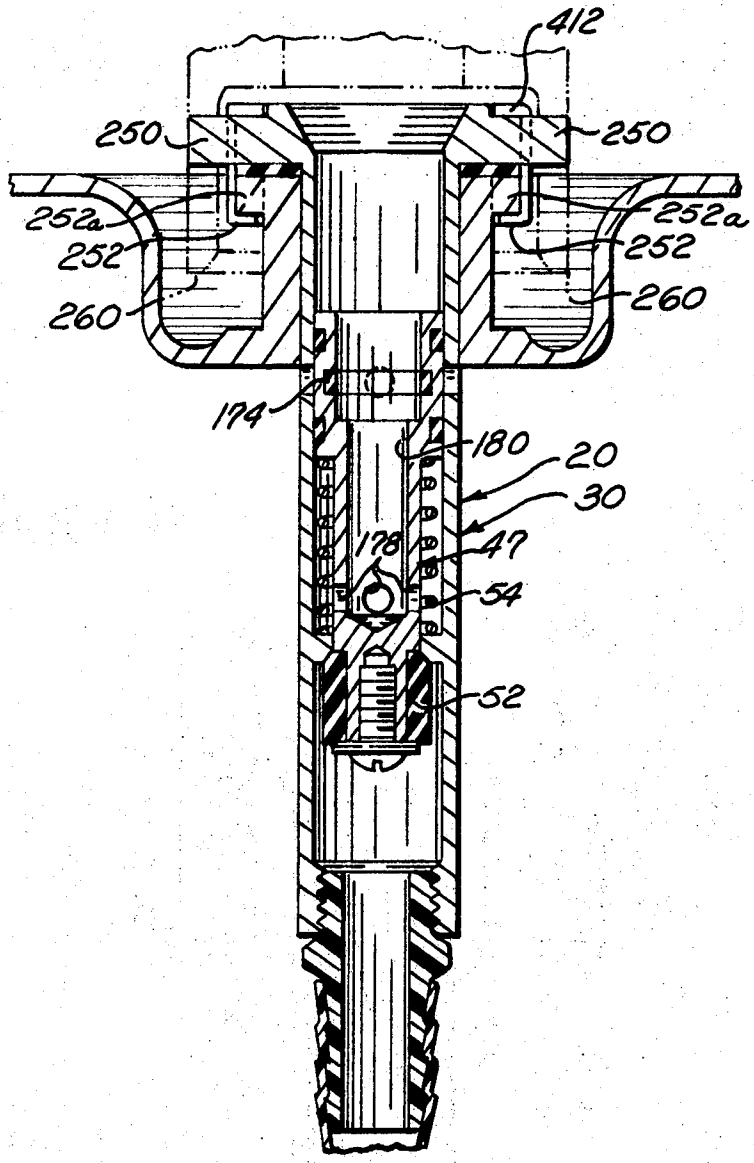


FIG. 8

BEVERAGE TAPPING DEVICE

The present invention relates to a system for tapping a container or keg for a beverage so that the beverage can be dispensed therefrom.

Beverage-tapping systems are conventionally used in dispensing of fluids such as beer for example. One particular type of beverage-tapping system involves the use of a key or container for the beverage and which container has a container valve unit on it which is biased to a closed position to prevent a beverage contained in the container or key flowing therefrom during shipment or transit. For purposes of dispensing the beverage from the container, the container valve unit which is carried on the container must be opened. A conventional known beverage tapping system includes a tapping unit which cooperates with the container valve unit and which specifically effects opening of the container valve unit to allow the liquid or beverage which is in the container to be dispensed therefrom. Such beverage tapping systems have also been utilized which provide for directing carbon dioxide gas into the container to facilitate and aid in the removal of the beverage therefrom. Examples of beverage-dispensing systems of the abovenoted type are disclosed in Frankfurt U.S. Pat. No. 3,026,006 and Stevens U.S. Pat. No. 3,228,413.

The present invention is directed to an improved tapping system of the type where the keg or container for the beverage is provided with a self-closing container valve unit and wherein a tapping unit in the hands of the user cooperates with the container valve unit to effect opening of the container valve unit to 1) direct the flow of CO_2 into the container to facilitate the removal of the beverage from the container, and 2) direct the flow of the beverage from the container. The tapping system of the present invention has all of the advantages of such known systems, but, in addition, has substantially improved functions and constructions.

The container valve unit of the present invention which is associated with the container comprises a body which may be secured to the keg in any conventional manner. That body contains a valve arrangement. The valve arrangement is such that it includes a spool-type valve for controlling the flow of CO_2 into the container and a poppet valve which controls the flow of the beverage from the container. The spool valve and poppet valve are formed on a common member which is biased in a direction to cause the poppet valve to be closed and thereby block the flow of liquid from the container during shipment and where the spool is likewise closed so as to block the CO_2 opening from communication with the atmosphere during shipment of the container.

The tapping unit which cooperates with the container valve unit includes a portion which cooperates with the member which forms the spool and poppet valve, and as the tapping unit is inserted into cooperative engagement with the container valve unit, the bias on the poppet and spool valves is overcome to effect an opening of the spool valve and the poppet valve so that the carbon dioxide may be directed into the container and the beverage in the container may be directed therefrom to the ultimate user.

For purposes of locking the container valve unit and the tapping unit together, the two units have a bayonet-type interconnection so that upon insertion of the tapping unit into the body member of the container valve unit and then rotation of the tapping unit, an engagement of the bayonet connection is established so as to lock the two units together in a secure manner.

The tapping unit, when used, is connected by some conduit, preferably a flexible conduit, to a dispensing tap or the like. Typically, if the tapping system is used in a tavern for dispensing beer, the beer keg or container could be located a substantial distance in a cool environment away from the dispensing valve through which the beer is dispensed into glasses for sale by the tavern keeper. The conduit which interconnects the key and the dispensing valve is generally filled with the beverage being dispensed. One of the problems in the prior art has been that upon disconnection of the two units of the tapping system, the conduit which directs liquid to the dispensing valve from the container is open to the atmosphere and the liquid therein drains out on the floor. In order to handle that problem, the tapping system of the present invention has an automatic shutoff in the tapping unit so that prior to disconnection of the two units, a valve arrangement in the tapping unit is closed so as to prevent the drainage of fluid from that conduit which interconnects the tapping unit with the dispensing valve. In addition, the valve in the tapping unit, which automatically closes off prior to disconnection, is maintained closed until the tapping unit is locked in position with respect to the container valve unit. Accordingly, the present tapping system provides a delayed action in which a valve mechanism in the tapping unit opens only after the container valve unit and the tapping unit are securely locked together and closes prior to disconnection of the two units. Accordingly, this provides an automatic shutoff so that the conduit which interconnects the tapping unit and the dispensing valve will not drain when the tapping unit and container valve unit are disconnected.

The valve which provides the automatic control for the shutoff in the tapping unit comprises a rotatable barrel which rotates within the housing of the tapping unit, the housing being connected by the flexible conduit to the dispensing valve. The barrel rotates so as to align an opening therein which is in communication with the beverage in the container with an opening in the housing therefor. That rotation, however, of the barrel occurs only after the aforementioned bayonet locking connection is securely engaged. Moreover, on disconnection, the valve in the barrel is rotated in the reverse direction so as to close off and move the two passages, namely, the one in the barrel and the one in the housing of the tapping unit, out of alignment prior to disconnection of the bayonet coupling. There is a similar valve arrangement in the barrel and housing for the carbon dioxide

The valve barrel and housing therefor which have the relative rotation to provide for the afore-mentioned automatic shutoff for beverage and carbon dioxide prior to disconnection have a unique seal arrangement therebetween. Specifically, the valve barrel carries a cage-type seal which is unique in construction and provides the desired sealing engagement so as to prevent leakage of fluid between the relatively rotatable parts.

In addition, the present invention is also applicable for use with kegs or containers having a wide variety of constructions and may be attached to a container having any type of opening construction thereon. The container valve unit may be threaded onto the barrel,

which is of a generally conventional nature, or, alaternatively, a crimping cap may be utilized for crimping or clamping the container valve unit onto the container.

Further features and advantages of the present invention will be apparent to those skilled in the art to which it relates from the following detailed description of a preferred embodiment thereof made in connection with and reference to the accompanying drawings in which:

FIG. 1 is a somewhat schematic perspective view of a dispensing system embodying the present invention;

FIG. 2 is a sectional view on an enlarged scale taken approximately along the section line 2—2 of FIG. 1 and illustrating the container valve unit;

FIG. 3 is a sectional view showing the container valve unit and tapping unit in cooperative locked engagement;

FIG. 4 is an enlarged view of a part of the tapping unit;

FIG. 5 is a fragmentary sectional view of the tapping unit;

FIG. 6 is an elevational view of a seal used in the tapping unit;

FIG. 7 is a somewhat schematic view of a portion of the tapping unit; and

FIG. 8 is a view of a modified container valve unit.

Referring to FIG. 1, there is illustrated a system in which beverage in a keg 10 is dispensed through a dispensing valve 11 to the ultimate user of the beverage. The dispensing valve 11 is connected by a suitable conduit, such as a flexible hose 12, to a tapping device or system, generally designated 14 and embodying the present invention. The tapping device 14 is also connected by a conduit 16 to a supply or container of carbon dioxide gas 17, which gas is directed into the container by the tapping device 14 so as to assist in the dispensing of the beverage from the container 10. The dispensing valve or device 11 may be of any conventional construction and, of course, includes a valve mechanism which is opened and closed upon movement of a handle 11*a* in accordance with the desired demand for beverage in the container 10.

The tapping system 14, embodying the present invention, consists of two main units, one being a container valve unit, generally designated 20, and the other being a tap unit, generally designated 21. The container valve unit 20 is secured to the keg 10 and is shipped therewith, and the tap unit 21 is used by the user and cooperates with the container valve unit 20 to effect the dispensing of the beverage as desired.

The key unit 20 includes a body member 30 which has a threaded portion 31 which cooperates with and is threaded into a threaded bung portion 32 formed integrally with the container 10. The body portion 30 has a projecting elongated hollow tubular portion 34 which projects downwardly into the container 10. At the lower end of the projecting portion 34, there is a threaded opening 36 into which an adapter 38 is threaded. The adapter 38 is suitably secured to a dispensing tube or tap tube 40 which projects downwardly into the keg to the bottom thereof, and through which the beverage in the container is dispensed. A suitable O-ring seal 42 is provided between the bung portion 32 of the container 10 and a shoulder 44 on the body portion 30 of the unit 20.

Located intermediate the ends of the projecting tubular portion 34 of the body member 30 is a shoulder portion 45 which has an opening 46 therethrough. A valve member, generally designated 47, projects through the opening 46, and the valve member 47 is movable longitudinally in the bore of the projecting portion 34. The valve member 47 has at its upper end a spool-type valve portion 50, and at its lower end a poppet valve portion 52. A spring member 54 acts between the shoulder 45 and the spool valve portion 50 and biases the valve member 47 in a vertical or upward direction as indicated in FIG. 2.

More specifically, the spring 54 biases the poppet valve 52 into engagement with its valve seat 60, blocking the flow of the beverage from the tube 40 past the valve 52. When the poppet valve 52 is in engagement with its valve seat 60, thereby closing same, the spool valve is located in the position shown in FIG. 2, and in that position the spool valve portion 50 is located so that O-rings 62 and 64 carried thereby at spaced locations are located on opposite sides of openings 66 which are located in the projecting portion 34. As a result of this construction, the openings 66 are blocked from communication with the central opening in the projection 34, and at the same time the poppet valve 52 is in engagement with the valve seat 60.

From the above, it should be apparent that the container valve unit 20 is of an automatic shutoff-type with the valve 52 automatically closed and in a biased closed position during shipment of the keg. Likewise, the openings 66 are closed from communication with the atmosphere due to the positioning of the spool valve portion 50 in the location shown in FIG. 2. Accordingly, the keg 10 with the container valve unit 20 thereon is shipped free of the possibility of outside atmosphere or foreign matter being communicated into the keg and likewise free of concern of the contents of the container leaking from the keg.

When it is desired to tap the keg 10, as noted hereinabove, the tapping or user unit 21 is positioned in cooperative association with the keg unit 20 to effect opening of the poppet valve 52 so that the beverage in the container may be directed therefrom, and the opening of the spool valve 50 so as to enable carbon dioxide to be directed into the keg 10 through openings 66 to facilitate and assist in the dispensing of the beverage from the keg. The tap unit 21 includes a body portion 100. The body portion 100 has opposite projecting portion 101 and 101*a*. The portion 101 is suitably connected in a suitable manner with the conduit 12 and the portion 101 has a passageway 102 for directing fluid into the conduit 12 so that the fluid may be directed to and dispensed from the dispensing valve arrangement 11. The portion 101*a* of the tapping device of the body 100 also has a passageway 106. The passageway 106 communicates with the carbon dioxide supply conduit 16 and is connected to the conduit 16 by a suitable connector or adapter 108. A nut 110 cooperates with a threaded portion 112 on the projection 101a and clamps the various parts together.

Located in the conduit 106 are flexible lever-type members 112a which function as a valve and which open under the pressure of the carbon dioxide being directed therein and which are biased closed by the inherent resiliency thereof. The members 112a prevent

or block the flow of beverage through the opening **66** and into the passageway **106** past the members into the carbon dioxide supply upon a malfunction of some type in the unit.

The body member **100** also has a threaded bore **114** in which is threaded a suitable relief-valve arrangement, generally designated **116.** The relief-valve arrangement **116** is a safety valve for venting carbon dioxide pressure to the atmosphere in the event of an excessive pressure being established in passage **106.** Such relief values are of common construction and will not be described in detail herein. It should be noted, however, that the relief valve includes a threaded member with a nut or head **120** thereon which is located above the upper surface of the body member **100.**

The body member **100** has a central bore **122** therein. The bore **122** has a wide end portion **122***a* which communicates with the lower end of the body **100** and has an upper portion **122***b* which communicates with the upper end of the body. The two portions **122***a* and **122***b*, being of different diameters, provide a shoulder **124** therebetween.

A barrel-type valve member, generally designated **130,** is located in the bore **122.** The barrel member **130** includes a main body portion **131** which is located in the bore **122***a* and an upper projecting portion **132** which projects upwardly from the portion **131** and through the bore portion **122***b* in the body **100.** The portion **132** of the member **130** has a tapped opening **134** and a suitable handle **136** is secured to the upper projecting portion **132** of the member **130** by a suitable fastening screw **138.**

The handle member **136** has a hub portion **140** and a suitable spring detent mechanism **141** is carried by that hub portion. The spring detent mechanism **141** is threaded into an opening **142** in the hub portion **140** and has a detent **143** forming a portion thereof. The detent **143** is received in a recess or opening **144** (See FIG. **4**) in the upper surface of the body member **100** when the tapping unit is closed, as will be described hereinbelow. A suitable curved-type spring washer encircles portion **132** and applies a biasing force urging the barrel member **130** downwardly relative to the body **100** and holds the parts in engagement.

In order to effect a locking of the tap unit **21** with the container valve unit **20,** the two units are provided with a bayonet-type of locking connection. In this connection, the body member **30** of the keg unit **21** has upwardly projecting portions **150** and **151** both of which have radially inwardly directed projections **150***a* and **151***a*, respectively. These projections are located 180° apart and project toward each other.

The body member **100** has a lower projecting portion **155** which projects downwardly between the radial projections **150***a* and **151***a*. The portion **155** carries a pair of radially directed flanges **155***a* and **155***b*. The flanges **155***a* and **155***b* have cam or ramp portions **160** which cooperate with the undersurfaces **161** and **162,** respectively, of the radially directed projections **150***a*, **151***a*.

The tap unit **21** is secured in position with respect to the container valve unit **20** by inserting the tap unit **21** downwardly until the portions **155***a* and **155***b* are located beneath the cooperating portions **150***a* and **151***a*. Then the tap unit **21,** including the handle **136,** the body member **100,** as well as the member **130,** is rotated so as to cause a rotation of the portions **155***a* and **155***b* relative to the body member **30** of the container valve unit **20.** This results in a locking engagement between the upper surfaces **161** and **162** of the portions **155***a* and **155***b*, respectively, with the under surfaces of the projections **150***a*, **151***a*. These parts rotate as a unit due to the fact that the detent **141** is received in opening **144.**

When the tap unit **21** is inserted into cooperative engagement to effect a locking thereof to the keg unit **20,** a projecting portion, designated **170,** of the barrel member **130** projects downwardly into the portion **34** of the container valve unit. The outer tip **171** of the portion **170** engages the shoulder **172** on the valve member **47** and forces the valve member **47** downwardly, as viewed in FIG. **2,** to the position illustrated in FIG. **3.** It should be apparent that the outer tip **171** of the portion **170** is inserted into an O-ring seal **174** so as to prevent leakage of fluid between the internal portion of the spool valve member **50** and the projecting portion **170.** Also, it should be apparent that O-ring **171***a* carried by the member **130** engages tapered surface **30X** of the body member **30** of the container valve unit **20** to provide a seal therebetween.

When the projection **170** is inserted into and engages the shoulder **172** on the member **47,** the member **47** is moved thereby against the bias of the spring **54.** This results in performing two functions. One function is the opening of the poppet valve **52** so that the fluid may then flow through the tube **40** around the poppet valve **52** through radially directed openings **178** into the interior **180** of the member **47.** The fluid may then flow through the interior **182** of the member **170** upwardly into a radially directed bore **184** and if the bore **184** is aligned with the passageway **102,** as will be discussed hereinbelow, the fluid may flow directly to the dispensing valve **11.**

At the same time, as the poppet valve **52** is opened by the insertion of the member **170** into cooperative engagement with the member **47,** the spool valve portion **50** is moved downwardly to the position shown in FIG. **3.** This effects opening of the passage **66** so that carbon dioxide may flow from the supply **17** through the conduit **16,** the passageway **106** and into a radially directed passageway **190** and into a vertically directed passageway **191** in the barrel member **130,** if the passage **190** is aligned with the passage **106.** That fluid likewise flows between the projecting portion **34** of the member **30** and the projecting member **170** of the barrel member **130,** and then radially outwardly through the openings **66** into the container **10.**

In the above description, it is noted that both carbon dioxide may flow into the container **10** and the beverage may flow out of the container **10,** if, on the one hand, the opening **190** in the barrel member **130** is aligned with the passageway **106** and, if, on the other hand, the passage way **184** is aligned with the passageway **102.** When the unit **21** is inserted into unit **20** to effect a locking engagement thereof, these passageways are not aligned. When the member is initially inserted into position so as to open the valve member **52** and the spool valve **50,** as noted hereinabove, it is necessary to rotate the housing member **100** to effect a locking of the bayonet connection between the housing member **100** and the body **30** of the keg unit **20.** This rotation effects no relative rotation between the barrel member **130** and the housing **100,** due to the effect or action of the detent **143.** However, once the body member **100**

has rotated into a position where the two parts, namely, the container valve unit **20** and the tap unit **21**, are locked together so that the body member **100** can not rotate further, further rotation of the handle **136** will not effect rotation of the body member **100**, since it is blocked from rotation due to the locking action of the bayonet coupling connection.

Accordingly, further rotation of the handle **136** causes a rotation of the barrel member **130** within the body **100**. This rotation can be effected even though the O-ring **174** is in sealing engagement with the projection **170**, which projection rotates within the O-ring **174**. Rotation of the handle member **136** is provided for and permitted until a projecting portion **190***a* (See FIG. 7) on the hub **140** engages the nut **120**, and, accordingly, at that point further rotation of the handle is prohibited. However, the unit is constructed so that at that point the bore **190** is aligned with the passage **106** and the bore **184** is aligned with the passage **102** and is now operative to direct carbon dioxide into the keg and to direct the liquid from the keg.

It should be apparent, however, that during the assembly or insertion of the tap unit **21** into cooperative locking engagement with the keg unit **20**, neither carbon dioxide nor beverage could be directed into or from the conduits **16** and **12**, due to the fact that the bores **190** and **184**, respectively, were not in alignment with the bores **106** and **102**, respectively, but rather are located as shown in FIG. **5**. Also, when the units have been locked together, the handle **136** is in the position illustrated in FIG. **7** relative to the nut **120** and the detent **143** is still in recess **144**. The continued rotation of the handle **136** after the units have been locked together causes rotation of the barrel **130** to effect alignment of passage **184** with bore **106** and alignment of passage **190** with bore **102**. During this rotation the detent **143** is moved out of recess **144** and this rotation continues until projection **190***a* engages nut **120**, at which point the alignment has been effected and the beverage can then be dispensed. The slope of cam or ramp portions **160** with the force of spring **124** prevents body member **100** from rotation in relation to body member **30** until projection **190***a* engages nut **120**.

Once the keg has been emptied by the dispensing of the beverage therefrom, it is necessary to disconnect the tap unit **21** from the container valve unit **20**, and this occurs in a very beneficial way, due to the fact the valve arrangement is such that initial rotation of the handle **136** causes the valve barrel member **130** to rotate therewith relative to the body member **100**, it remaining locked to the body member **30**. This results in the bore **184** moving out of alignment with the bore **102** and likewise the bore **190** moving out of alignment with the bore **106** back to the position shown in FIG. **5**. Accordingly, this arrangement results in a closing or blocking of the flow of fluid into or from the conduits **12** and **16**.

After the initial amount of rotation of the handle member **136** occurs, the detent **142** drops into the recess **144** in the body member **100** and then further rotation of the handle **136** results in the body member **100** rotating along with the handle **136**. This results in an unlocking of the bayonet connections between the tap unit **21** and the container valve unit **20** and therefore, once released, the tap unit **21** can be removed from the keg by raising it. As that removal occurs, the spring **54** biases the poppet valve **52** back to a closed position, as well as the spool valve portion **50** back to its closed position.

It is important to note that prior to the disconnection and unlocking of the tap unit **21** from the keg unit **20**, the valve arrangement of the aligned passages in the barrel member **130** and the housing member **100** is such that this valve arrangement is closed. As a result, any fluid which is located in the conduit **12** is blocked from flow from the conduit **12** upon the disconnection of the tap unit **21** from the container valve unit **20**. In the prior art devices known, when such disconnection occurs, any beverage in such a conduit **12** would drain therefrom onto the floor, resulting in a waste of fluid and generally being detrimental and undesirable. The tapping device disclosed herein is the first which includes or provides a construction where there is a delay action which causes opening of the valve for directing fluid from the tapping device only after the tap unit is attached and locked to the container valve unit **20**; and likewise whereupon disconnection of the two units, a valve mechanism is operated to automatically block off the conduits leading to and from the tapping device prior to detaching or unlocking of the tap unit from the container valve unit.

From the above description, it should be apparent that the barrel member **130** rotates relative to the body member **100** to effect the alignment of the various passages during the operation of the tapping system for tapping of a keg. This relative rotation, of course, requires a seal structure interposed between the barrel member and the bore **122** in the body member **100**. The specific seal arrangement which is utilized at this location is a one-piece cage-type seal structure, generally designated **200** and shown in FIG. **6**. The seal includes upper and lower ring portions **201** and **202** which encircle the portion **131** of the barrel member **130**. The portions of the seal **201** and **202** are vertically spaced and located on opposite sides of the openings **190** and **184** in the barrel member. In addition, there are four vertically arranged seal ribs, designated **203**, **204**, **205** and **206**. The ribs are arranged so that two of the ribs extend on each side of the passage **190** and two opposite ribs extend on each side of the passage **184**, as shown in FIG. **5**. When the valve or barrel member **130** is located in its closed or open position, it should be apparent that the ribs **203–206** provide a seal for preventing leakage of both carbon dioxide and the beverage between the barrel member **130** and the body member **100**.

A modification of the present invention is illustrated in FIG. **8**. As noted hereinabove, the container valve unit embodying the present invention can be utilized in a wide variety of different keg or container constructions. A modified container valve unit is shown in FIG. **8** and which is structurally similar to that described hereinabove, with the exception that it is utilized with a barrel unit which does not have a threaded opening therein. In view of the similarity of the units, only the differences will be described herein, and those relate to the manner of securing of the unit **20** to the container **10**.

In the embodiment shown in FIG. **8**, the body **30** of the container valve unit **20** does not have a threaded portion but rather has radially projecting portions, generally designated **250**. The portions **250** project through openings in a nut **412** which is threadless but

rather is a crimp-type nut. The sides of the nut have slots for receiving the portion **250** of the body **30** and the bottom flange portion of the nut is crimped under the projecting shoulder portion **252***a* of the barrel or keg **10.** As a result, the crimp nut clamps the body portion **30** of the container valve unit **20** onto the keg. The crimping of the portion **252,** of course, occurs after the parts are assembled as shown.

In the embodiment of FIG. **8,** any suitable means may be provided for securing the tapping nut **21** onto the body unit **30,** and accordingly such is not shown or will be described in detail. However, a suitable type of bayonet connection may be provided between cooperating portions **260** of the tapping unit **21,** shown in phantom in FIG. **8,** with the outer ends of the projecting portions **250.**

Both embodiments of the present invention are capable of being used for tandem tapping of beverage containers. In tandem tapping, a series of containers **10** are interconnected. Specifically, the outlet passage **102** of one container is connected with the inlet passage **106** of the next tap unit. As a result the beverage, which is dispensed ,is dispensed through the various containers in a tandem manner. The first container is connected with a CO_2 supply. In order to provide for such tandem tapping, the passageway **106** is appropriately sized with respect to the passageway **102** in order to enable a steady flow of beverage through the units. And, in fact, the various flow passageways are substantially equal in flow capability. This is true notwithstanding the fact that the passageway **106** is provided for directing CO_2 into the container when the unit is not being used for tandem tapping.

Having described our invention, we claim:

1. Apparatus for tapping a container comprising a container valve unit having a fluid-dispensing passage including a self-closing valve in said passage and which self-closing valve has a closed position blocking fluid flow therethrough, a tapping unit having a portion cooperable with said self-closing valve to effect opening thereof upon insertion of said tapping unit into said container valve unit, said container valve unit having a body portion adapted to be secured in an opening in said container, said tapping unit also having a body portion, said body portion of said tapping unit and said body portion of said container valve unit having cooperable bayonet connecting means which interconnect and lock said units together upon insertion of said tapping unit into said body portion of said container unit and upon relative rotation therebetween, said tapping unit having a passageway for receiving fluid from said fluid-dispensing passage and for directing fluid therefrom, said body portion of said tapping unit having an outlet therein and a barrel member inserted in a chamber in said body member and rotatable therein, said barrel member having a passageway therein communicating with said fluid-dispensing passage, means supporting said barrel member for rotation relative to said outlet in said body member of said tapping unit to effect alignment of said passageway in said barrel member with the outlet in said body member and to move said passageway out of alignment with said outlet on disconnection of the tapping unit from the container valve unit, said barrel member having a handle secured thereto and which is turned to effect rotation of said barrel member relative to said body member and a detent mechanism acting between said handle member and said body member to enable rotation of said barrel member and said body member to occur together to effect locking of said bayonet connecting means, and means responsive to locking of said connecting means to release said detent mechanism to enable said barrel member to rotate relative to said body member only after said bayonet locking means has locked said body portions together.

2. Apparatus for tapping a container comprising a container valve unit having a fluid-dispensing passage including a self-closing valve in said passage and which self-closing valve has a closed position blocking fluid flow therethrough, a tapping unit having a portion cooperable with said self-closing valve to effect opening thereof upon insertion of said tapping unit into said container valve unit, said container valve unit having a body portion adapted to be secured in an opening in said container, said tapping unit also having a body portion, said body portion of said tapping unit and said body portion of said container valve unit having cooperable connecting means which interconnect and lock said units together upon insertion of said tapping unit into said body portion of said container unit and upon relative rotation therebetween, said tapping unit having a passageway for receiving fluid from said fluid-dispensing passage and for directing fluid therefrom, said body portion of said tapping unit having an outlet therein and a barrel member inserted in a chamber in said body member and rotatable therein, said barrel member having a passagewqy therein communicating with said fluid-dispensing passage, means supporting said barrel member for rotation relative to said outlet in said body member of said tapping unit to effect alignment of said passageway in said barrel member with the outlet in said body member and to move said passageway out of alignment with said outlet, said barrel member having a handle secured thereto and which is turned to effect rotation of said barrel member relative to said body member, and a detent mechanism acting between said handle member and said body member to enable rotation of said barrel member and said body member to occur together to effect locking engagement of said connecting means, and means responsive to locking engagement of said connecting means to release said detent mechanism to enable said barrel member to rotate relative to said body member only after said locking means has locked said body portions together.

3. Apparatus for tapping a container having an opening therein and projecting portions around the opening comprising a container valve unit having a fluid-dispensing passageway, a self-closing valve in said passageway and which has a closed position blocking fluid flow therethrough, a tapping unit having a portion cooperable with the self-closing valve to effect opening thereof, said tapping unit having a body portion and said container valve unit likewise having a body portion, said container valve unit being insertable through the opening in said container and having a tubular portion projecting thereinto with said self-closing valve being supported in said portion, and means for securing said container valve unit in said opening in said container including a crimping cap means which cooperates with a part of said body portion of said container valve unit and a part of said container, said crimping cap means comprising a cap portion which has sides with slots therein for receiving projecting portions of said body portion of said container valve unit and deformable tang portions projecting downwardly and which are deformable under projecting portions of the container in order to effect a clamping of said body portion of said container valve unit to said container.

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