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Johnston

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[45] **March 13, 1973**

[54] **PORTABLE BEER SIPHON DEVICE**

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[73] Assignee: **Draft Systems, Inc.,** Northridge, Calif.

[22] Filed: **June 29, 1970**

[21] Appl. No.: **50,822**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 889,485, Dec. 31, 1969, Pat. No. 3,608,790, which is a continuation-in-part of Ser. No. 819,706, April 28, 1969, Pat. No. 3,610,478.

[52] **U.S. Cl.** **222/400.7,** 137/212, 222/400.8

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

[58] **Field of Search** 222/400.7, 400.8; 137/212, 137/170.1; 138/42

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Primary Examiner—Robert B. Reeves
Assistant Examiner—David A. Scherbel
Attorney—LeBlanc & Shur

[57] **ABSTRACT**

The device includes a keg adapter mounted within a 1 ½ inch keg opening and a dispenser coupler secured to the keg adapter, the adapter and coupler having gas and liquid passages for permitting ingress of gas into the keg and outflow of beer from the keg. The gas passage receives gas from a hand operated portable plunger type pump with the beer dispensing outlet including a spout. The coupler is secured to the adapter by rotating the former relative to the latter which, in turn, opens normally closed gas and liquid valves in the adapter. A liquid valve is disposed in the coupler and displacement of the spout opens the valve to permit outflow of beer therefrom.

6 Claims, 10 Drawing Figures

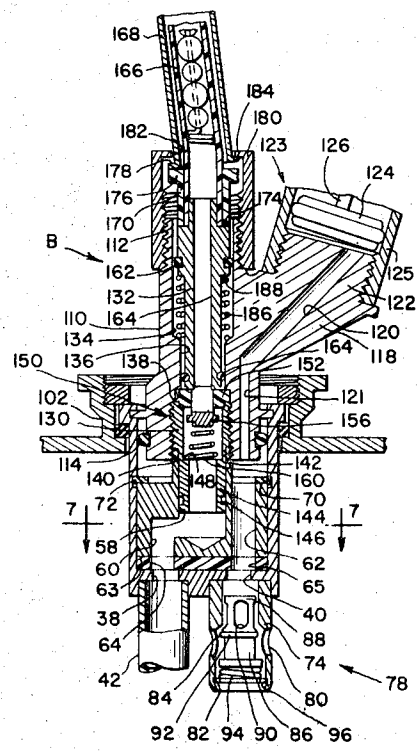


FIG. 1

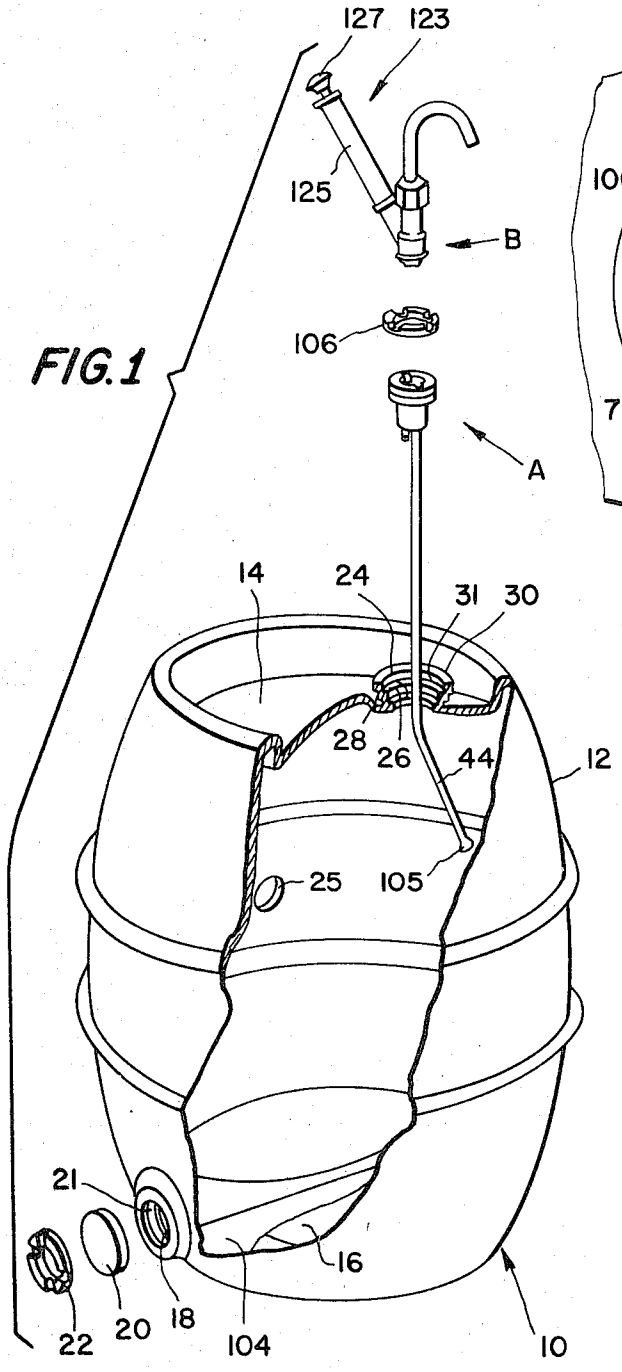
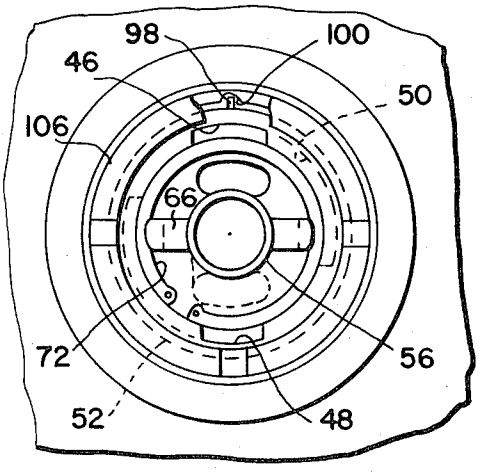


FIG. 5



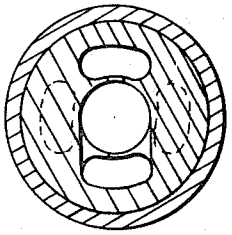


FIG. 6

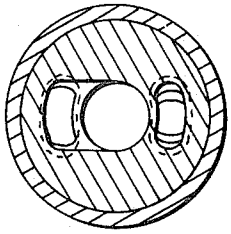


FIG. 7

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FIG. 2

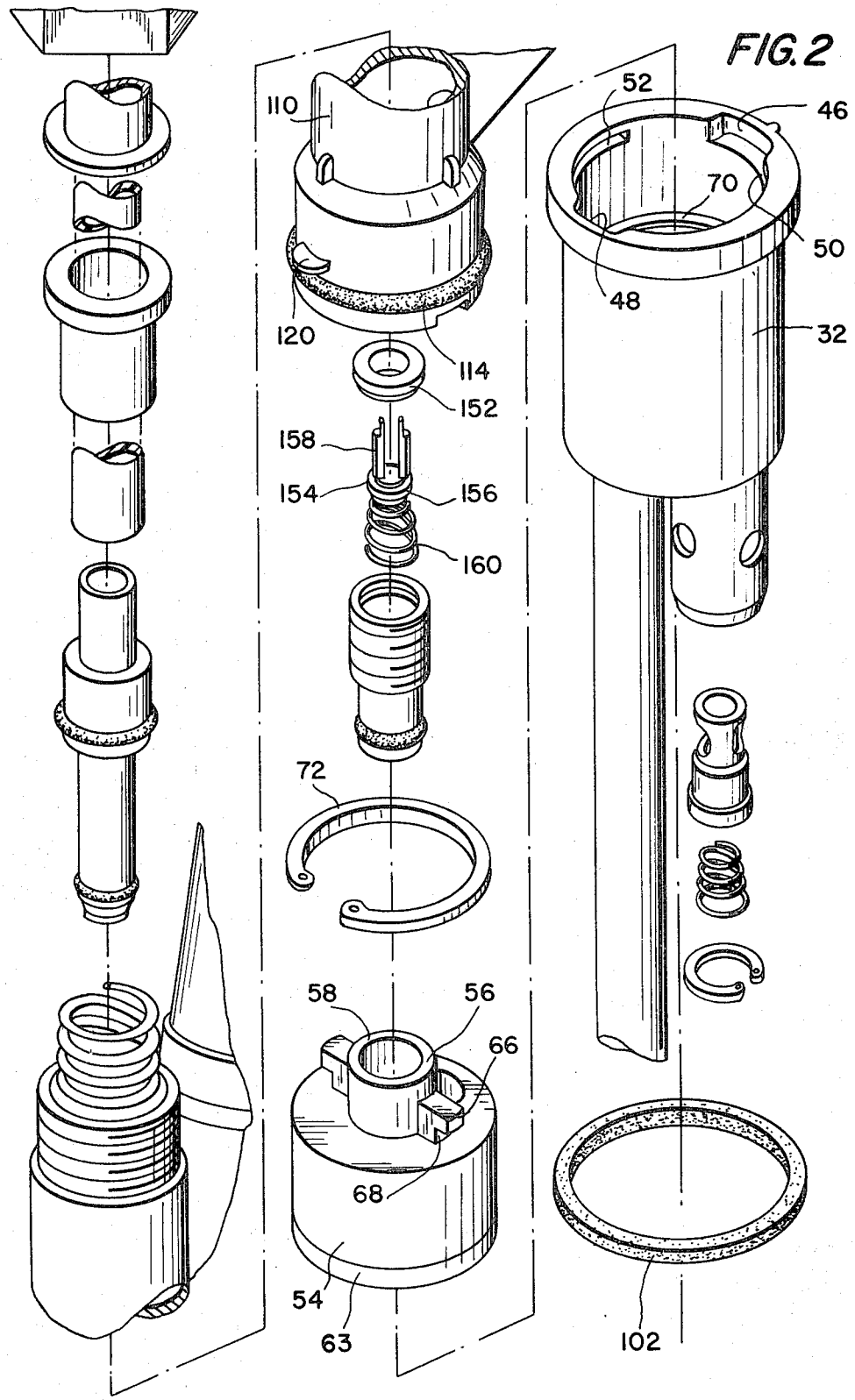

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FIG. 3

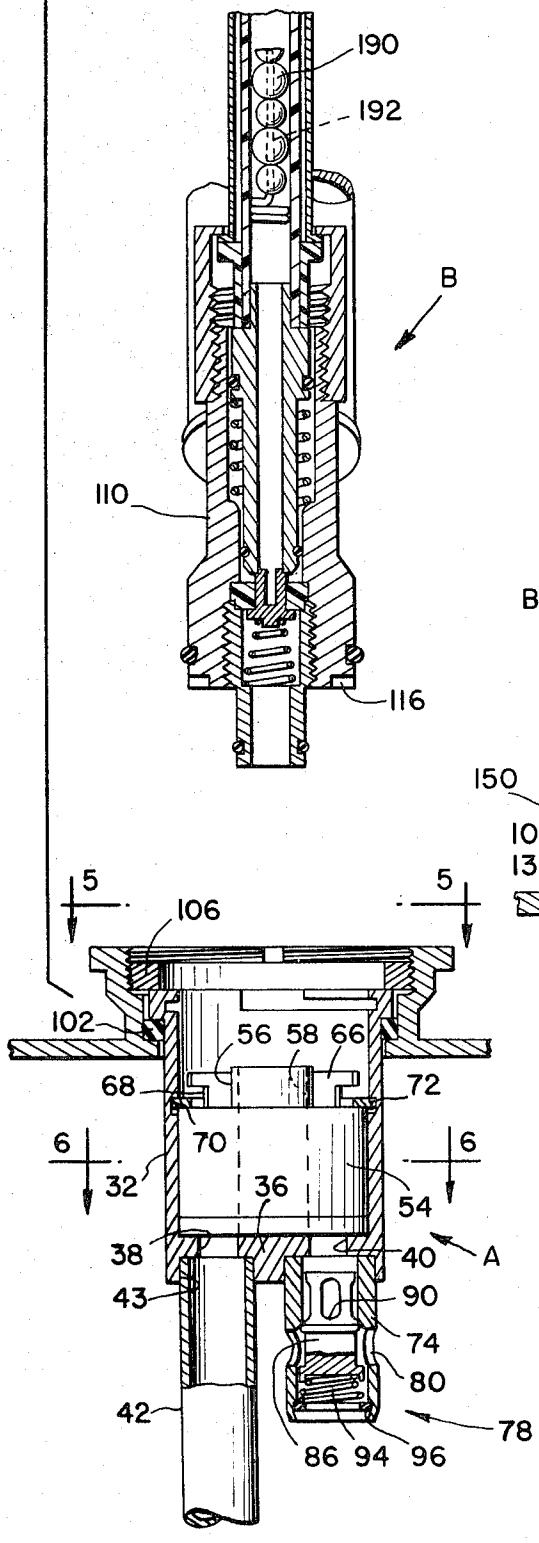

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FIG. 4

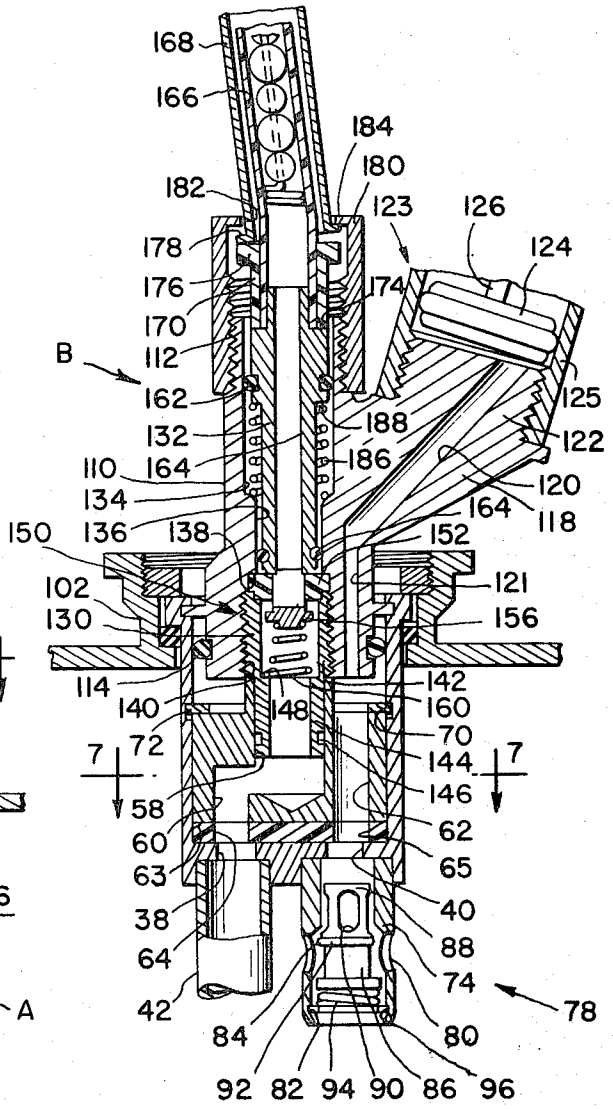
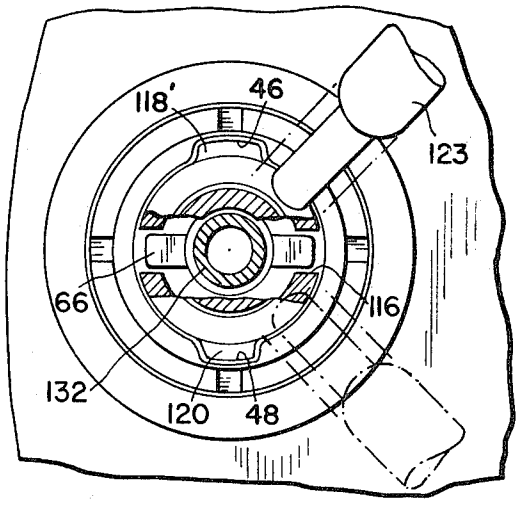

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FIG. 8



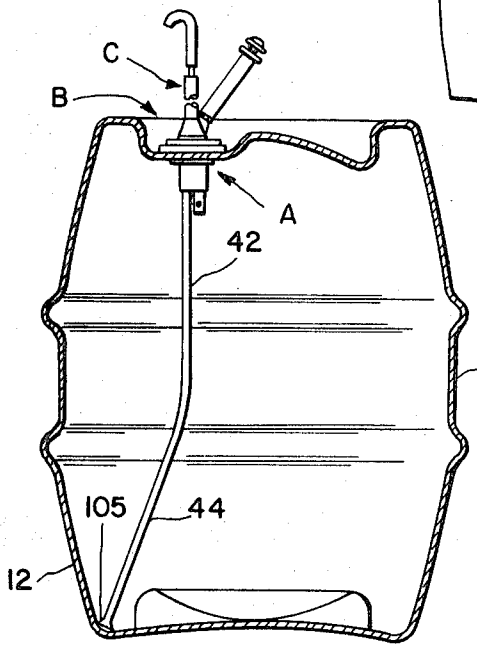


FIG. 10

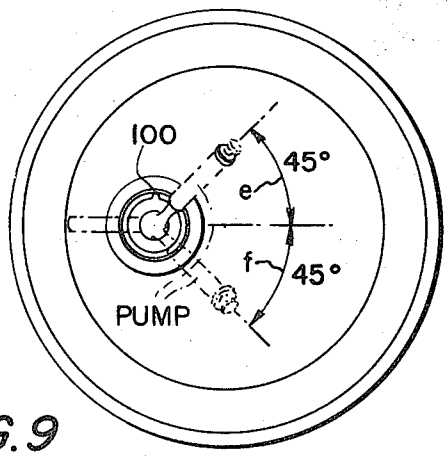


FIG. 9

PORTABLE BEER SIPHON DEVICE

This application is a continuation-in-part of my copending application Ser. No. 889,485 filed Dec. 31, 1969, now U.S. Pat. No. 3,608,790 dated Sept. 28, 1971; said application Ser. No. 889,485 being a continuation-in-part of my copending application Ser. No. 819,706 filed Apr. 28, 1969, now U.S. Pat. No. 3,610,478 dated Oct. 5, 1971.

The present invention relates to an improved beer siphoning device and particularly relates to an improved picnic type portable beer siphoning device. The portable siphoning device hereof is particularly adapted for use in the so-called "Golden Gate" tapping systems which are characterized by kegs having one and one-half inch diameter openings.

An ever present problem exists in providing satisfactory draft beer at locations remote from those facilities especially equipped to handle and dispense draft beer such as those facilities usually encountered in restaurants, taverns and the like. One particular problem in providing a picnic type portable beer siphoning device is the provision of a dispensing unit having a suitable pressure source for tapping the keg at a remote location whereby the beer may be properly drawn. The usual CO2 cylinder which is provided in facilities normally handling draft beer is, of course, to cumbersome to be readily provided at such remote locations. There is also an inherent danger in improper operation of the CO2 cylinder and related beer tapping equipment by persons generally unskilled in this type of operation.

Portable pumps of the type employing a piston and cylinder arrangement have been employed as the pressure source in such remote locations. Pumps of this type particularly lend themselves to the tapping of a beer key at remote locations as they are readily adapted for attachment to the dispensing or siphoning device, develop sufficient pressure to drive the beer from the keg, and dispense a satisfactory glass of beer. Additionally, they are readily and easily utilized by people generally unskilled in he mechanics of tapping a keg and drawing satisfactory beer. An example of a portable beer siphoning device is disclosed in my U.S. Pat. No. 3,422,488 issued Jan. 14, 1969 and No. 3,494,514 issued Feb. 10, 1970. These portable siphoning devices are however adapted specifically for use with kegs of the so-called "Peerless" type which are characterized by dispensing openings having a three quarter inch diameter. The portable siphoning devices therein disclosed, are, however, specifically designed for use with keg adapters compatible with the Peerless type kegs, i.e., similar to the adapters disclosed in the aforementioned patents. Such portable siphoning devices have not been adapted for use in beer tapping devices employed in kegs of the so-called "Golden-Gate" type which are characterized by a keg opening of about 1 ½ inches in diameter.

For background information, the fluid dispensing industry, particularly the beer dispensing industry, utilizes primarily two distinct types of tapping systems each using specially constructed kegs or containers. One such system is the Peerless type employing a keg having a three-quarter inch opening. Beer tapping units employed with this system usually comprise a keg adapter receivable within the keg opening and secured therein at the brewery, the adapter having liquid and gas passages and normally closed valves. At the beer tapping establishment, a coupler is releasably secured to the keg adapter and opens one or both of the valves in the adapter depending on the type of valve employed. This type of unit is illustrated in my U.S. Pat. No. 3,422,448 and is also illustrated in my U.S. Pat. No. 3,494,514, the latter illustrating a keg adapter in combination with a portable siphoning device.

The other currently utilized tapping system employs the Golden Gate type keg which is characterized by an enlarged opening, usually about 1 ½ inches in diameter, in both its top wall and a side wall. One method of tapping a keg of the Golden Gate type is to provide two separate fittings for the keg openings, one for introducing gas or air into the keg through the top wall opening and the other for withdrawing the beer from the keg through the side wall opening. This type of arrangement has proven generally unsatisfactory from many standpoints although the Golden Gate keg is used by some of the largest U. S. breweries and there is a reluctance to abandon the system due to the substantial capital investment therein notwithstanding its well known disadvantages.

As disclosed in my aforementioned U.S. patent application Ser. No. 889,485, there is providing a tapping system for use with a Golden Gate type keg wherein its side wall opening is permanently sealed and the top wall opening receives a keg adapter having gas and liquid passageways therethrough and normally closed valves in each passageway. In that application, a coupler is provided for use with the keg adapter at the dispensing establishment and is there releasably secured to the keg adapter in a manner to open the gas and liquid valves in the adapter to provide a through gas passage for ingress of gas into the keg through the coupler and adapter and a liquid passageway from the keg through the adapter and coupler for outflow of beer to a dispensing faucet. The coupler disclosed in that application is useful with the type of tapping systems usually provided in restaurants, taverns, and the like, and cannot be readily employed at remote locations.

The present invention provides an improved portable beer siphoning device which eliminates and/or minimizes the foregoing discussed problems associated with tapping beer from kegs at remote locations and provides a portable keg siphoning device particularly useful with the Golden Gate type keg. Particularly, the present invention includes a keg adapter secured in the enlarged 1 ½ inch diameter opening of the Gold Gate type keg, which adapter may be of the type described and illustrated in my co-pending application, Ser. No. 889,485 filed Dec. 31, 1969, and a dispenser coupler releasably secured to the keg adapter, the dispenser coupler carrying a portable pump of the piston and cylinder type to provide gas into the keg through gas passages in the coupler and adapter and including a liquid passage and a movable spout for dispensing beer from the keg. As disclosed in my aforementioned prior application, the keg adapter has gas and liquid passageways and normally closed valves therein. The coupler hereof is rotatably secured to the keg adapter and opens the liquid and gas valves in the adapter in response to such rotation. The coupler includes a normally closed liquid valve which is opened by displace-

ment of the beer spout on the coupler whereby beer under pressure flows through the keg adapter into the dispenser coupler for dispensing through the spout. Upon release of the spout, the liquid valve in the coupler automatically closes precluding further outflow of beer from the keg through the adapter and coupler.

Accordingly, it is a primary object of the present invention to provide an improved beer siphoning device of the type for use in remote locations where there is no readily available dispensing apparatus or source of gas under pressure, and having a portable manually operated pump.

It is another object of the present invention to provide an improved portable beer siphoning device of the type for use in remote locations specifically useful in tapping a Golden Gate type keg.

It is still another object of the present invention to provide an improved portable beer siphoning device for use with a Golden Gate type keg wherein controlled dispensing of beer directly from the beer keg is obtained by simply pivoting the curved spout carried by the coupler unit.

It is a further object of the present invention to provide an improved portable beer siphoning device for use with the keg adapter disclosed in my co-pending application Ser. No. 889,485 filed Dec. 31, 1969.

These and further objects and advantages of the present invention will become more apparent upon reference to the following specification, appended claims and accompanying drawings wherein:

FIG. 1 is a perspective view with parts broken out for ease of illustration of a typical Golden Gate type keg and in which the improved tapping device of the present invention is installed, the latter device being illustrated in exploded juxtaposition;

FIG. 2 is an enlarged exploded prospective view of the parts forming the new improved tapping unit of the present invention;

FIG. 3 is a vertical cross sectional view of the keg adapter as assembled in the keg opening and the coupler prior to its securement to the keg adapter;

FIG. 4 is a fragmentary vertical cross sectional view of the tapping unit hereof with the coupler being illustrated as secured to the keg adapter in tapping position and the valves in the keg adapter in an open position;

FIG. 5 is a cross sectional view thereof taken about on lines 5—5 in FIG. 3;

FIG. 6 is a cross sectional view thereof taken generally about on lines 6—6 in FIG. 3;

FIG. 7 is a cross sectional view of the keg adapter taken generally about on lines 7—7 in FIG. 4;

FIG. 8 is a plan view of the tapping unit illustrated in FIG. 4 with parts broken out for ease of illustration and illustrating the movement of the coupler arm with respect to the keg adapter in tapping the keg;

FIG. 9 is a plan view of the keg with the keg adapter installed in the keg opening and illustrating the position of the beer spout within the keg and schematically illustrating the location of the coupler arm carrying the portable pump as the coupler is rotated between valve open and valve closed positions; and

FIG. 10 is a cross sectional view of the keg with the tapping unit hereof installed therein.

Referring now to the drawings, particularly to FIG. 1, there is illustrated one form of a conventional keg, generally indicated at 10, of the type commonly in use with the so-called "Golden Gate" type tapping systems. This conventional keg includes a cylindrical keg body comprising side walls 12 and upper and lower walls 14 and 16 respectively. As set forth below, these upper and lower walls are generally in a concavo-convex configuration. A keg opening 18 is provided through side wall 12 adjacent the bottom of the keg and, conventionally receives a fitting, not shown, for withdrawing beer from the keg. In utilizing the present invention, however, this conventional side wall fitting is not needed as both gas and beer are respectively supplied to and withdrawn from the keg through the other keg opening as will be described. Thus, in accordance with the present invention, opening 18 is sealed by application of a plug 20 clamped against a shoulder 21 in opening 18 by a ring 22 threadedly received within opening 18. The threaded opening 18 is standard for all Golden Gate type kegs and the sealing plug 20 and ring 22 are formed compatible with this type of opening whereby modification of the standard keg and keg opening are not necessary.

The conventional Golden Gate type keg also includes an opening 24 through the upper keg wall 14. The opening 24 in this form of keg is offset from the central axis of the keg and lies in a common diametrical plane with lower opening 18. A filler opening 25 is also formed through the side wall 12 of keg 10 to receive a filler rod, not shown, for transmitting beer into the keg at the brewery when the keg is being filled. Typically, the upper opening 24 is about 1 ½ inches in diameter and comprises stepped shoulders 26 and 28 forming a portion of an outwardly projecting annular flange 30, flange 30 being internally threaded outwardly of shoulder 28 as at 31.

The new improved, portable tapping unit of the present invention is adapted to be received within keg opening 24 for transmitting gas or air from a pressurized source, not shown, through opening 24 into the keg and for withdrawing beer from the keg through the same opening 24. The portable tapping device of the present invention comprises a keg adapter, generally indicated at A, which is releasably secured within the keg opening 24 at the brewery, and which, in cooperation with plug 20, seals the beer within the keg after filling at the brewery, and a coupler, generally indicated B, which is releasably secured to keg adapter A at the dispensing establishment and cooperates therewith to provide gas into the keg and withdraw beer under pressure from the keg.

The keg adapter A is fully described and illustrated in my aforementioned co-pending application Ser. No. 889,485 filed Dec. 31, 1969, which application is incorporated herein by reference thereto as though here fully set forth. Particularly, and now specifically to FIGS. 2–4, keg adapter A comprises a generally cylindrical housing or body 32 having a radially outwardly directed flange 34 at its upper end, and terminating at its lower end in a wall portion 36. Housing 32 is preferably an all stainless steel construction and a pair of laterally offset diametrically opposed openings 38 and 40 are formed through wall portion 36 to form portions of respective liquid and gas passageways through keg adapter A. The upper end of a siphon tube 42 formed, preferably of stainless steel tubing, is suitably

secured, as by brazing or the like, within a counterbored portion 43 of offset opening 38 in end wall portion 36 and, as seen in FIG. 10, extends substantially vertically within the keg when adapter A is secured within opening 24. The lower end portion 44 of siphon tube 42 is bent outwardly at about a 15 degree angle to extend toward the side wall 12 of keg 10, for reasons described hereinafter, when adapter A is finally secured within keg opening 24. Adapter body 32 also includes a pair of outwardly opening slots 46 and 48 (FIG. 2) extending different circumferential distances and which slots open outwardly of flange 34. Slots 46 and 48 are diametrically opposed one from the other and a pair of arcuate grooves or slots 50 and 52 extend along the inner wall of body 32 in like circumferential directions from the respective slots 46 and 48. Grooves 50 and 52 extend circumferentially in a common plane, and as described hereinafter in conjunction with slots 46 and 48, form a substantially twist type connection with coupler B.

A cylindrical valve body 54 is rotatably received within cylindrical adapter body 32 and includes an upwardly projecting sleeve portion 56 forming a central passage 58 (FIG. 4) through the upper portion of valve body 54. The lower end of passage 58 continues in a laterally offset passage 60. The underface of valve body 54 is provided with a seal 63, preferably formed of Teflon, the seal having offset openings 64 and 65 in alignment with passages 60 and 62 respectively. The seal 63 is preferably glued to the underface of the valve body 54 for sealing about openings 38 and 40 in the valve closed positions as described hereinafter. A passage 62 extends through valve body 54 at a like offset and diametrically opposed position as passage 60. When valve body 54 is located in the position illustrated in FIG. 4, passages 58 and 60, and opening 64, are aligned with opening 38 and in conjunction with siphon tube 42, form a liquid passage through adapter A. In the same valve position, passage 62 and opening 65 are aligned with opening 40 and, in conjunction with the gas check valve 78 to be described, form a gas passage through adapter A.

A pair of diametrically opposed lugs 66 project outwardly at diametrically opposed positions from sleeve portion 56 along the upper face of valve body 54. Lugs 66 extend radially a distance less than the radius of body 54 and are undercut as at 68 adjacent their outer ends. To retain valve body 54 in adapter body 32, the inner wall of body 34 is provided with a groove 70 for receiving a circlip 72. As is conventional, the circlip comprises a split ring which is formed as to exert a pressure in one direction when received in a groove. As seen in FIG. 3, circlip 72 is received within groove 70 and bears about the upper margin of valve body 54 to simultaneously retain valve body 54 in adapter body 32 and to urge seal 63 carried by valve body 54 into sealing engagement against the end wall portion 36 about openings 38 and 40. To assemble the adapter body, the valve body 54 is slipped into the adapter body 32 and the circlip 72 is contracted by a suitable tool, not shown, as to slip by the ends of lugs 66. Once under lugs 66 and within the cutout portion 68, the tool is removed from the circlip and the latter expands to lie within groove 70 with the inner margin thereof bearing against valve body 54, whereby, in the valve closed position, seal 63 effectively seals about openings 38 and 40.

The upper end of a nipple or sleeve 74 is received within a counterbored portion of opening 40 in end wall portion 36 and forms a part of a gas check valve illustrated generally at 78. Sleeve 74 has a plurality of openings 80 spaced circumferentially thereabout intermediate its ends and has a groove 82 formed about its inner wall adjacent its lower end. Sleeve 74 is provided with a valve seat 84 and slideably receives a valve stem 86 having a cylindrical upper portion 88 which, in turn, has a plurality of openings 90 spaced circumferentially thereabout. An O-ring 92 is provided about valve stem 86 and an upper end of a spring 94 bears against the lower end of stem 86. A circlip 96 is provided in groove 82 and provides a seat for the lower end of spring 94.

As can best be seen in FIG. 6, valve body 32 is provided with a radially outwardly projecting lug 98 and the unthreaded portion of the keg outwardly of shoulder 26 is provided with a slot 100. To secure keg adapter A within the keg opening, a seal 102 is disposed on keg shoulder 26 or about valve body 32 below flange 34 and keg adapter A is then inserted through opening 24 from without the keg. That is to say, the siphon tube 42 is first inserted into opening 24 followed with the keg adapter body 32. For reasons hereinafter noted, it is important that the keg adapter be aligned in a predetermined circumferential position relative to the keg opening. Accordingly, when inserting adapter A within the keg opening, adapter body 32 is rotated to align lug 98 with slot 100. In this fashion, the inclined portion 44 of siphon tube 42 is located to extend outwardly the side wall 12 of keg 10. As seen in FIGS. 3 and 4, flange 34 seats against O-ring seal 102 which, in turn, seats against shoulder 26 about keg opening 24. When the adapter is finally seated, the lower end of siphon tube 42 rests on the bottom wall of the keg adjacent keg trough 104 between the side wall 12 and the semi-circular rims defining the concavo-convex portion of the lower end of the keg. The lower end of siphon tube 42 is flared as at 105 and since it is also inclined, provides an enlarged beer opening into siphon tube 42. An externally threaded locking ring 106 is threaded into the internally threaded portion 31 of keg opening 24 to clamp keg adapter flange 34 and seal 102 against shoulder 26. In this fashion, the keg adapter A is semi-permanently secured within the keg opening with the seals 64 and 102 preventing outflow of beer from the keg.

Referring now particularly to FIGS. 3 and 4, the new portable dispenser coupler B of the present invention includes a main cylindrical body or head 110 having a reduced diameter externally threaded upper end 112. An O-ring seal 114 is disposed about the lower diametrically enlarged portion of head 110 in a suitable groove for sealing about the interior walls of adapter body 32 when the coupler is secured to the adapter in a manner to be described. The lower end of head 110 includes a pair of diametrically opposed recesses 116 for cooperation with lug 66 on keg adapter A in a manner to be described. As best seen in FIGS. 2, 5, and 9, a pair of diametrically opposed lugs 118 and 119 project from opposite side walls of the enlarged diameter lower portion of head 110 and extend different circumferential distances as to be receivable within the respective

openings 46 and 48 formed on keg adapter A. An arm 118 projects laterally from one side of head 110 and includes an inclined bore 120 opening through the lower end of head 110 via an offset bore 121. An arm 118 includes an upwardly inclined externally threaded projection 122 for threadedly receiving the lower end of a manually operated portable air pump generally indicated at 123. Air pump 123 may comprise any conventional type pump and includes a piston 124 mounted for reciprocating movement within a cylinder 125 by a piston rod 126 carrying an externally disposed knob or handle 127. It will be appreciated that reciprocation of piston 124 within cylinder 125 pumps air through the passages 120 and 121 in a conventional manner.

Coupler B also includes a valve and valve actuating assembly comprising a fitting 130 fixed to the lower end of head 110 and a sleeve 132 mounted for axial reciprocating movement within the central bore 134 of head 110. As best seen in FIGS. 3 and 4, bore 134 includes a reduced diameter bore portion 136 having a shoulder 138 axially inset from its lower end and an enlarged internally threaded lower bore portion 140. Fitting 130 includes an externally threaded upper portion 142 for threaded engagement within lower bore 140 and a depending probe 144 carrying an O-ring seal 146 adjacent its lower end. Fitting 130 includes a central bore which is stepped to provide a shoulder 148 for purposes to be described.

A liquid or beer valve generally indicated at 150 is provided in head 110 and comprises an annular chuck washer 152 clamped against shoulder 138 by fitting 130, a bifurcated valve 154 including a valve plate 156 from which a pair of spaced arms 158 project through the central opening in chuck washer 152 and a valve spring 160 seating at one end against the under side of valve plate 156 and, at its other end, against seat 148. Spring 160 normally biases valve plate 156 against seat 152 to maintain the liquid valve closed. The valve structure is, in all respects, identical to the valve structure described and illustrated in my U.S. Pat. No. 3,422,448 issued Jan. 14, 1969, the disclosure of which is incorporated herein by reference thereto as through here fully set forth.

Valve actuating sleeve 132 is concentrically positioned within the bore 134 of head 110 and is provided with external grooves mounting O-ring seals 162 and 164 positioned to provide a seal about the liquid passageway. Sleeve 132 has a central bore 164 defining a central liquid passageway in communication with the opening in chuck washer 152, the lower end of sleeve 132 seating against arms 158 of valve 150. The upper end of sleeve 132 receives the lower end of a tube 166, preferably plastic, which extends substantially coaxially through a curved inverted J-shaped metal tube 168 through which beer is dispensed when valve 150 and the valves in the adapter are opened. An annular member 170 surrounds the lower end of tube 166 and the upper reduced diameter end of probe 132, the lower ends of member 170 and tube 166 abutting a shoulder 174 formed on sleeve 132. The upper end of member 170 has an outwardly extending flange 176 which engages the bottom of a flange 178 formed on the lower end of tube 168.

A collar 180 is threaded on the upper end of head 110 and has a central aperture 182 is such that tube 168 is easily and freely slidable therethrough and also readily canted with respect to head 110. The flange 178 butts the inturned edge 184 of collar 180 surrounding aperture 182. Thus, because of the engagement between flange 178 and collar edge 184, the lower ends of tubes 166 and 168, member 170, and sleeve 132 are retained within head 110 against the bias of a compression spring 186 which surrounds sleeve 132 and is positioned between the shoulder 188 on sleeve 132 and a shoulder formed between the different diameter portions of bore 134. Thus, pressing down on the J-shaped tube 168 or canting the tube as illustrated in FIG. 4, axially displaces member 170 and sleeve 132 against the bias of spring 186 to axially displace valve 150 which, in turn, displaces valve plate 156 from valve seat 152 against the bias of spring 160 to open the liquid valve.

To employ the keg tapping device hereof, the keg adapter A is installed at the brewery in the opening 24 in the manner as previously described. When the keg 10 is disposed at the remote location and is to be tapped, the coupler B is aligned above keg adapter A such that lugs 118 and 120 are aligned with slots 46 and 48 respectively. Accordingly, when coupler B is displaced downwardly toward adapter A with lugs 118 and 120 being received within the respective slots 46 and 48, the lower end of fitting 130 is received within the sleeve portion 56 of valve body 54. Note that the O-ring seal 146 on probe 144 seals about sleeve portion 56. Furthermore, when the coupler is aligned as previously described, recesses 116 on coupler B also align above the lugs 66 on valve body 54. Thus, when coupler B has been displaced downwardly to its fullest extent, lugs 118 and 120 are aligned with the corresponding arcuate slots 50 and 52 respectively, while simultaneously, lugs 66 are located in recesses 116. When coupler B is thus disposed, it is rotated in a clockwise direction as seen in FIG. 9 with the lugs 118 and 120 on coupler B riding along the respective arcuate slots until lugs 118 and 120 bear against the ends of the respective slots 50 and 52 which then comprise stops precluding further rotation of coupler B relative to adapter A. Clockwise rotation as seen in FIG. 9 of coupler B relative to adapter A also rotates valve body 54 clockwise through the engagement of lug 66 in recesses 116 to locate the passageway 60 and 62 in valve body 54 in respective alignment with the openings 38 and 50 en end wall portion 36 of adapter A. Thus, when the coupler is precluded from further rotation by the slot end stops, there is provided a through gas passage into keg 10 through coupler B and adapter A comprising the lower end of cylinder 125 of pump 123, passages 120 and 121 through coupler B, passageway 62, opening 65, opening 40 and the sleeve 74. Gas valve 78 is a check valve and stem 86 will be displaced downwardly against the bias of spring 94 when suitable pressure is introduced in the gas passageway previously described by actuation of the manual pump 123 whereby gas may flow into the keg through openings 88, past valve seat 84 and through the openings 80 in sleeve 74. Note that when the coupler is received within adapter body 32, O-ring seal 114 seals against the inner wall of body 32 whereby the gas passage is sealed.

When valve body 54 has been rotated to the position illustrated in FIG. 4 as previously described, liquid passage is provided through adapter A comprising siphon tube 42, opening 38, opening 64 in seal 63, passageways 50 and 58 in valve body 54, and the central bore 142 in probe 130. In order to open the normally closed liquid valve 150 and thereby to dispense liquid from the inverted J-shaped tube, the latter tube is depressed or canted with respect to head 110 to axially displace member 170 and sleeve 132 as illustrated in FIG. 4. Downward displacement of these elements displaces valve plate 156 from valve seat 152 opening valve 150. Thus, a through liquid passage is provided upon canting or depressing of inverted J-shaped tube 168 whereby beer under pressure supplied by the manually operated pump 123 can flow from the keg through adapter A and coupler B with the terminal portion of J-shaped tube 168 serving as the faucet. Upon release of J-shaped tube 168, spring 186 displaces sleeve 132 and member 170 outwardly against flange 178 of tube 168 whereby flange 178 engages the inner edge 184 of collar 180 permitting the valve spring 160 of liquid valve 150 to urge the valve plate 156 against chuck washer 152 again sealing the passage.

It is a further significant feature of the present invention that when the keg adapter A is properly positioned and secured within keg opening 24 as previously described, slots 46 and 48 on adapter A and lugs 118 and 120 on coupler B are so located relative to one another, such that coupler arm 118 and hence pump 123 lie in a position whereby the arm and/or pump can be conveniently grasped and rotated without interference from the upper rim of the keg and lie wholly within the cylindrical confines of the keg. Preferably, a 90° rotation of the coupler is provided to accomplish its securement with adapter A and the opening of the gas and liquid valves in adapter A as previously described. When the adapter is properly located, the coupler arm and pump make about a 45° angle indicated at e with a radius of the keg extending through the center of the tapping unit. By rotating the coupler clockwise for about 90° toward securement in the adapter, the coupler arm will pass by the center of the keg and make about a 45° angle indicated at f with the radius of the keg extending through the tapping unit in the tapped position. Thus the coupler arm and pump will lie wholly within the cylindrical confines of the keg rim portion and can be readily and easily grasped to effect coupling and uncoupling of coupler B to adapter A without injury to the individual tapping the keg or interference from the rim of the keg.

Referring to FIGS. 3 and 4, there is illustrated a plurality of beads or balls 190 having varying diameters and disposed within the flexible tube 166 for the purpose of slowing and thereby improving flow through tube 166. Balls 190 are maintained in flexible tube 166 by an elongated wire 192 which is coiled at opposite ends and extends through central openings formed in balls 190. This ball wire arrangement extends approximately for one-half the length of the inverted J-shaped tube. As the keg is usually overpressurized by manually pumping, these restrictions slow the beer flow through the spout and preclude overcarbonization.

It will thus be appreciated the objects of the present invention have been fully accomplished in that there has been provided an improved beer siphoning device for use with a Golden Gate type tapping system and also with a keg adapter of the type disclosed and illustrated in my co-pending application, Ser. No. 889,485 filed Dec. 31, 1969. The improved portable beer siphoning device hereof, as will be appreciated from the foregoing description, is readily and easily actuated to dispense beer through the inverted J-shaped spout merely by canting or depressing the spout with the beer valve in the coupler automatically sealing the beer passage upon release of the inverted J-shaped tube.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment is therefore to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are therefore intended to be embraced therein.

What is claimed and desired to be secured by United States Letters Patent is:

1. A liquid dispensing apparatus for use with a keg or like container having top, bottom and side walls with an opening in at least one of said walls comprising: a keg adapter having a generally cylindrical body adapted to be secured within the keg wall opening and having gas and liquid passageways extending therethrough for the respective transfer of gas into the keg and of liquid out of the keg, normally closed valve means in said gas and liquid passageways, said valve means including a valve body rotatable in a plane extending substantially normal to the axis of said body between a first position sealing said passageways and a second position opening said passageways, a dispensing coupler unit including a coupler head having gas and liquid passageways therethrough, means for releasably securing said coupler head to said keg adapter, means carried by said coupler head for rotating said valve body into said second position and locating the respective gas and liquid passageways in said coupler and said adapter in communication one with the other, a member movably carried by said coupler head, means carried by said coupler head for biasing said member for movement into a first position, a normally closed valve carried by said coupler head in its liquid passageway, and means extending exterior of said coupler head for selectively moving said member against said bias into a second position to open the normally closed valve carried by said coupler when said coupler head is secured to said adapter, said member comprising a sleeve forming a portion of said liquid passage, said moving means being coupled to an end of said sleeve and forming a continuation of the liquid passage through said sleeve; said biasing means biasing said sleeve for movement in one direction with said exterior means being adapted to move said sleeve in a direction opposite to said one direction.

2. Apparatus according to claim 1 wherein said coupler head has a shoulder, means securing said moving means to said coupler head including a projection carried by said moving means and engageable against said shoulder, said biasing means normally maintaining said projection in engagement against said shoulder.

3. Apparatus according to claim 1 wherein said coupler head includes an externally threaded portion, a collar threadedly engaging said threaded coupler head portion and having an inwardly directed annular flange defining a central opening, said moving means including a tube receivable through said opening and carrying a flange inwardly of said collar engageable against the flange on said collar, said biasing means normally maintaining the flange carried by said tube in engagement against the flange carried by said collar.

4. Apparatus according to claim 1 wherein said gas passage means includes a bore through said coupler head offset from the central axis thereof, said biasing means including a spring engaging between said sleeve and said coupler head.

5. A liquid dispensing apparatus for use with a keg or like container having top, bottom and side walls with an opening in at least one of said walls comprising: a keg adapter having a generally cylindrical body adapted to be secured within the keg wall opening and having gas and liquid passageways extending therethrough for the respective transfer of gas into the keg and of liquid out of the keg, normally closed valve means in said gas and liquid passageways, said valve means including a valve body rotatable in a plane extending substantially normal to the axis of said body between a first position sealing said passageways and a second position opening said passageways, a dispensing coupler unit including a coupler head having gas and liquid passageways therethrough, means for releasably securing said coupler head to said keg adapter, means carried by said coupler head for rotating said valve body into said second position and locating the respective gas and liquid passageways in said coupler and said adapter in communication one with the other, a member movably carried by said coupler head, means carried by said coupler head for biasing said member for movement into a first position, a normally closed valve carried by said coupler head in its liquid passageway, and means extending exterior of said coupler head for selectively moving said member against said bias into a second position to open the normally closed valve carried by said coupler when said coupler head is secured to said adapter, said moving means including inner and outer concentric tubular means with said inner means forming a continuation of said liquid passage in said coupler head, said coupler head having a shoulder, means securing said moving means to said coupler head including a projection carried by said outer tubular means and engageable against said shoulder, said biasing means normally maintaining said projection in engagement against said shoulder.

6. A liquid dispensing apparatus for use with a keg or like container having top, bottom and side walls with an opening in at least one of said walls comprising: a keg adapter having a generally cylindrical body adapted to be secured within the keg wall opening and having gas and liquid passageways extending therethrough for the respective transfer of gas into the keg and of liquid out of the keg, normally closed valve means in said gas and liquid passageways, said valve means including a valve body rotatable in a plane extending substantially normal to the axis of said body between a first position sealing said passageways and a second position opening said passageways, a dispensing coupler unit including a coupler head having gas and liquid passageways therethrough, means for releasably securing said coupler head to said keg adapter, means carried by said coupler head for rotating said valve body into said second position and locating the respective gas and liquid passageways in said coupler and said adapter in communication one with the other, a member movably carried by said coupler head, means carried by said coupler head for biasing said member for movement into a first position, a normally closed valve carried by said coupler head in its liquid passageway, and means extending exterior of said coupler head for selectively moving said member against said bias into a second position to open the normally closed valve carried by said coupler when said coupler head is secured to said adapter, said valve in said coupler head including a movable valve element and a valve seat, means for biasing said valve element into normal sealing engagement with said valve seat, said member being engageable with said valve element to displace the latter away from said seat in response to movement of said member from its first position into its second position, said member comprising a sleeve forming a portion of said liquid passage, said moving means being coupled to an end of said sleeve and forming a continuation of the liquid passage through said sleeve; said biasing means biasing said sleeve for movement in one direction with said exterior means being adapted to move said sleeve in a direction opposite to said one direction, said valve seat having a central opening, said valve element including a plate engageable against said seat and a stem extending through said central opening, said sleeve being engageable with said stem to displace said plate away from said seat to open said valve.

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