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BEVERAGE TAP

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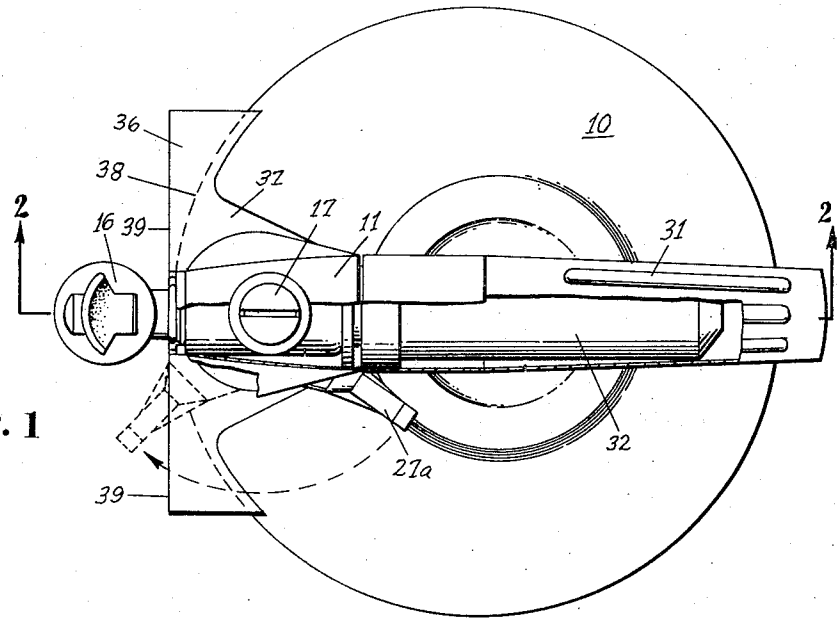

Fig. 1

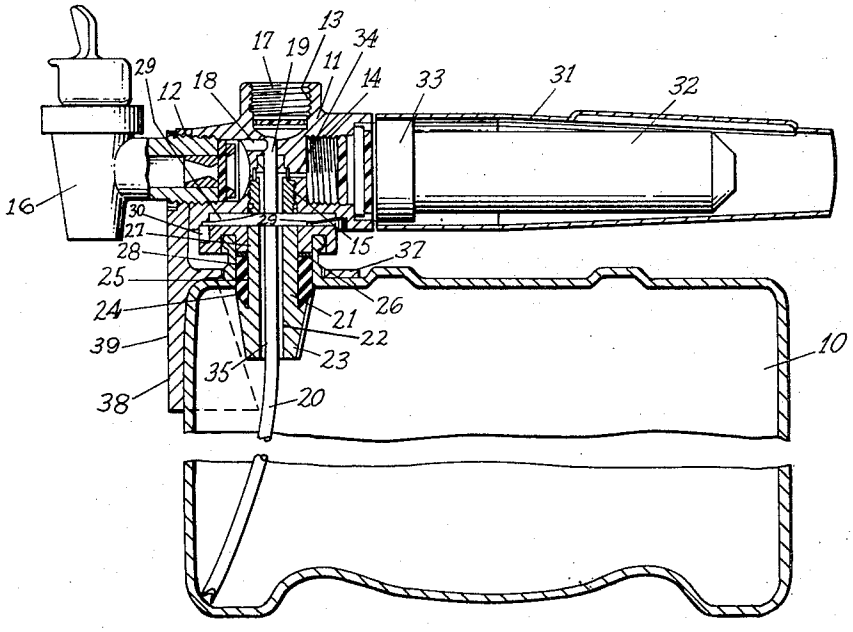

Fig. 2

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BEVERAGE TAP

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ABSTRACT OF THE DISCLOSURE

A beverage tap for engagement in a dispensing orifice of a container as for example an aluminum pony keg and the like having a plug member for insertion in sealing engagement in the dispensing opening of the container and aligned therewith a first dispensing opening and at right angles thereto on one side a second dispensing opening and on the other side a handle member within which a cartridge of compressed gas is enclosed. A spigot and a plug are provided, both of which may be threaded into either of the first or second dispensing openings so that the contents of the keg may be dispensed with the keg standing on end or wih the keg on a horizontal axis. A stabilizer element forms a part of the beverage tap to take some of the strain when the keg is lifted by the handle and to provide a flat surface to prevent rolling of the keg when it is disposed on a horizontal axis.

This invention relates to a beverage tap, that is, a device which may be sealingly inserted into a dispensing orifice in a beverage container, and by means of which pressure may be applied to the container to dispense the contents of the container through the tap.

Quite recently, there has been a development in merchandising of beverages and particularly beer, wherein the beverage is packed in an aluminum cylindrical structure which might be referred to as a small keg. Such packages of beer and also of various soft drinks, are intended for use in the home or on picnics or the like, where a larger amount of beverage is needed than can be conveniently handled in cans or bottles.

Such cylindrical containers as above outlined, generally have a dispensing opening which may be sealed by means of a conventional bottle cap or the like. In order to dispense the beverage from such a container, the cap is simply lifted from the dispensing opening and then some sort of a tap is inserted into the opening and sealed to the opening, and means must be provided to introduce a gas under pressure into the container so as to dispense the contents thereof through a suitable faucet.

With the foregoing considerations in mind, it is a principal object of the invention to provide a relatively simple tap structure, and means for engaging it sealingly with the dispensing opening of the container. It is a further object of the invention to provide the tap with means serving as a handle, so that the container with the tap sealingly secured thereto, may be lifted and transported by means of such handle. It is still another object of the invention to provide, in association with said handle, means for providing the gas pressure necessary to dispense contents from the container, by means of a cartridge of gas under pressure disposed within the handle, there being conventional means for piercing the cartridge to permit flow of gas therefrom. Since such containers may sometimes be used with the container axis in a horizontal position and other times in a vertical position, it is still another object of the invention to provide a beer tap which may be used to dispense from the container whether it is in a vertical or a horizontal position.

These and various other objects and advantages of the invention will be described in greater detail hereinafter or they will be apparent to one skilled in the art upon reading these specifications.

Reference is made to the drawing forming a part hereof and in which:

FIGURE 1 is a plan view of a typical container having the beer tap of this invention attached thereto; and

FIGURE 2 is a fragmentary cross sectional view thereof taken on the line 2—2 of FIGURE 1.

Briefly, in the practice of the invention, there is provided a body member having four openings in a generally cruciform arrangement. To one of these openings there is secured a shank having a compressible sleeve adapted to be inserted into the dispensing opening of the container and to be sealed thereto. To an adjacent one of the four openings, there is secured a handle element which is hollow and adapted to contain a conventional CO_2 cartridge or the like, with conventional means for puncturing the cartridge to admit gas to the container. The other two openings, which of course are also adjacent, are provided with identical internal threads, and a faucet member and a plug may be alternatively inserted in these two openings. With the faucet member in one of them and the other opening plugged, the tap will dispense from the container in a vertical position; and if it is desired to dispense from the container in a horizontal position it is only necessary to reverse the tap and plug, and then horizontal dispensing may be achieved.

Referring now in more detail to the drawing, a typical beverage container is indicated generally at **10**. The tap comprises basically a body member **11**, provided with the four threaded openings **12**, **13**, **14** and **15** which are arranged in a generally cruciform arrangement.

The openings **12** and **13** are of identical size and have identical internal threads. A faucet member is generally indicated at **16** and a plug member at **17**. With the parts **16** and **17** in the position shown, the arrangement is convenient for dispensing from the cylindrical container **10** when disposed in a vertical position. It will now be clear that if it is desired to dispense from the container **10** when the latter is in a horizontal position, it is only necessary to remove the plug **17** and the faucet **16** and interchange them. The faucet **16** will then be screwed into the opening **13** and the plug **17** into the opening **12**.

Within the body **11**, the opening **12** communicates with a passage **18** and the opening **13** communicates with a passage **19**. The passages **18** and **19** are in communication and they communicate with a dip tube **20** which will be described in more detail hereinafter.

Threaded into the opening **15** is a shank **21** having an internal bore **22**. The shank has the enlarged head **23**, providing the angular shoulder **24** against which a resilient compressible sleeve **25** abuts. This sleeve may be of rubber or rubber like material. A thin washer **26** rests against the sleeve **25** and the sleeve is actuated by a locking collar **27**. It will be understood that the sleeve **25**, washer **26**, and locking collar **27** all fit snugly over the shank **21** with the sleeve **25** engaging the shoulder **24**. All of these parts are of such a diameter that they fit snugly through the dispensing opening **28** in the container **10**.

From the foregoing description, it will be clear that if pressure is exerted on the locking collar **27** in a downward direction, the sleeve **25** will be compressed between the washer **26** and the shoulder **24** and will therefore spread radially into sealing engagement with the opening **28** thus locking the tap structure to the container in sealing engagement.

The downward movement (as seen in FIGURE 2) of the locking collar **27** is accomplished by means of a series of arcuate cam surfaces on the underside of the body **11**

around the opening 15. These cam surfaces are indicated at 29. The locking collar 27 is provided with the cam follower members 30, of which there are as many as there are cam surfaces. In a typical arrangement there may be three arcuate cam surfaces 29 on the underside of the member 11 and symmetrically distributed thereabout. In such event the locking collar 27 will have three upstanding cam followers 30. In this way even pressure is achieved circumferentially of the locking collar 27. It will be understood that the cam surfaces, near their ends, may be provided with small depressions (not shown) for engagement by the followers 30, to prevent accidental back sliding thereof down the cam surfaces 29. A handle member 27*a* (FIGURE 1) extends outwardly from the locking collar 27 and by rotating the handle member 27*a* from its solid line position to its broken line position (FIGURE 1) the members 30 are caused to ride down the cam surfaces 29 so as to displace the locking collar 27 axially in a downward direction thus compressing the sleeve 25, and causing it to firmly engage within the dispensing opening 28.

The dip tube 20, mentioned above, extends down through the bore 22 in the shank 21 and into the container 10. The beverage to be dispensed when under pressure, passes upwardly through the dip tube 20 and then through that one of the openings 12 or 13 to which the faucet member 16 has been secured. It is prevented from passing out through the other of said openings by the plug 17.

To the fourth opening 14 there is secured the handle member indicated generally at 31. The handle member 31 is hollow and is adapted to contain a cartridge of a suitable gas under pressure and indicated more or less diagrammatically at 32. A pressure regulating device which does not form any part of the present invention is indicated at 33 and will not be described further. It is also to be understood that conventional puncturing means for the cartridge 32 are provided (not shown). The pressure regulating device 33 is necessary because for different beverages different gas pressures are required. For example, the pressure required within the container for dispensing beer is substantially different from that required for dispensing a soft drink such as Coca-Cola. Suitable pressure regulating devices are available for the desired pressure, under the conditions prevailing in the particular instance.

The annular space in the shank 21 between the bore 22 and the dip tube 20 communicates with a small bore 34, and it is through the bore 34 that pressure is applied from the cartridge 32. This gas from the cartridge 32 flows through the bore 34 and the annular space 35 between the dip tube 20 and the bore 22 and into the container 10. It is this pressure which then forces the beverage up through the dip tube 20.

In order to give better support when it is desired to use the handle member 31 to lift or transport the container 10, there is provided a stabilizer element generally indicated at 36. The stabilizer 36 may be integral with the body member 11, or secured thereto in any desired manner, as by threads or by welding. As best seen in FIGURE 1, the stabilizer element fits around a substantial arc at the end of the container, and also over the top of the container. The flange 37 is provided with a hole for the passage of the dispensing opening, so that to assemble the tap to the container the shank and its associated parts are passed down through the dispensing opening and the hole in the flange 37 will then accommodate the spout of the dispensing opening; and in its final position of assembly when the parts are locked together, the flange 37 lies against the end of the container 10 while the portion 38 embraces the cam body over a substantial arc, thus providing firm support. It should be noted that the front face of the stabilizer element 36 is flat as indicated at 39, so that when the beverage tap is inserted in the container 10 in position for dispensing when the container is in a horizontal position, the flat surface 39 rests upon the table or other support and prevents rolling of the container.

From the foregoing description it will be seen that there has been provided a device which is easily applied to, and removed from a container. It is also a device which can be used with either a vertically or horizontally disposed container, and which may be cleaned very easily. The circular cam action means are simple and not likely to get out of order, and of course the device is entirely reusable simply by the use of fresh gas cartridges.

It will also be apparent that numerous modifications may be made without departing from the spirit of the invention and therefore no limitation is intended which is not specifically set forth in the following claims.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows.

We claim:

1. A beverage tap for use with a beverage container having a dispensing orifice for the beverage therein, comprising a body, means for releasably securing said body in operative relation to said orifice, means for introducing gas under pressure through said body into said container, said body having two openings substantially at right angles to each other, means to conduct beverage in said container through said body to both said openings, a faucet member and a plug member interchangeably connectable in said openings, whereby to dispense from said container in a vertical or horizontal position.

2. A tap according to claim 1, wherein the means for releasably securing said body in operative relation to said orifice comprises an opening in said body opposite one of said first mentioned openings, said body around said last mentioned opening having a plurality of arcuate cam surfaces disposed symmetrically thereabout, a tubular shank having at one end threads engaging the threads in said last named opening and having at its other end a shoulder, a resilient compressible sleeve on said shank abutting said shoulder, and a locking collar on said shank abutting said sleeve, said locking collar having an extending lever for manipulation thereof, and having on its side which engages the said body a plurality of cam surface engaging elements, said shank, shoulder and resilient sleeve being of a size to be inserted freely into said dispensing orifice, and tightly engageable therein by rotation of said locking collar to compress said resilient sleeve between it and said shoulder to cause said sleeve to expand radially and seal said orifice.

3. A tap according to claim 1, said body having a shank and dip tube adapted to sealingly engage in said dispensing orifice, an annular space through said shank between said dip tube and the shank and a passage communicating with said annular space and connecting with an opening disposed opposite one of said first mentioned openings and a hollow handle member secured over said last named opening and adapted to contain a cartridge of gas under pressure, a pressure regulator and a puncturing device for permitting gas under pressure to pass through said last named passage and said annular space into said container to force said beverage through said dip tube for dispensing.

4. A tap according to claim 3, wherein said dip tube communicates with both of said first mentioned openings whereby gas pressure in said container forces the beverage therein through said dip tube and permits the beverage to be dispensed through that one of the two first mentioned openings to which the faucet member is secured.

5. A beverage tap according to claim 1, having a stabilizer member secured to said body and having a portion embracing a substantial arc of the cylindrical wall of said container and having a flange element lying against the end wall of said container about said dispensing orifice.

6. A beverage tap for use with a beverage container having a dispensing orifice for the beverage therein, com-

prising a body having four threaded openings in a substantially cruciform arrangement, two adjacent ones of said openings being of the same size and having identical internal threads, a passage in said body communicating with said two adjacent openings, said passage also communicating with a third one of said openings, said body around said third opening having a plurality of arcuate cam surfaces disposed symmetrically thereabout, a tubular shank having at one end threads engaging the threads in said third opening and having at its other end a shoulder, a resilient compressible sleeve on said shank abutting said shoulder, and a locking collar on said shank abutting said sleeve, said locking collar having an extending lever for manipulation thereof, and having on its side which engages the said body a plurality of cam surface engaging elements, said shank, shoulder and resilient sleeve being of a size to be inserted freely into said dispensing orifice, and tightly engageable therein by rotation of said locking collar to compress said resilient sleeve between it and said shoulder to cause said sleeve to expand radially and seal said orifice, a dip tube in communication with said passages and of smaller diameter than the inside diameter of said shank and passing through said shank to extend into the container, a second passage connecting the annular space between said dip tube and the fourth opening in said body, a hollow handle member secured over said fourth opening and adapted to contain a cartridge of gas under pressure, a pressure regulator and a puncturing device for permitting gas under pressure to pass though said second passage and said annular space into said container to force said beverage through said dip tube and into said first mentioned passage, a faucet member and a plug member having identical external threads, said faucet member engaging the threads in either of said first or second openings, and said plug member engaging the threads in the other of said first or second openings, whereby said faucet and plug members may be interchanged for dispensing from said container in a vertical or horizontal position.

7. A tap according to claim 6 having a stabilizing member, said stabilizing member being secured to said body and having a portion engaging a substantial arc of the cylindrical wall of said container and having a portion engaging the end wall of said container about said dispensing opening, the face of said stabilizing member opposite that which engages the cylindrical wall of the container being flat and of substantial width to prevent rolling of the container when disposed in a horizontal position.

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