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Zucconi

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[54] **TAPPING DEVICE FOR BEER KEGS**

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Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 190,796, Oct. 20, 1971.

[52] **U.S. Cl.** **222/400.7**

[51] **Int. Cl.** **B67d 5/54**

[58] **Field of Search** 222/400.7, 400.8; 251/346, 347, 349

[56] **References Cited**

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[57] **ABSTRACT**

Beer tapping attachments comprising a permanent keg unit including two normally closed spring-biased one-way valves to which unit is detachably secured a valve body which also includes two registering spring biased one-way valves, one connected to a source of air under pressure and the other to a beer spigot. All four valves are yieldably opened when the valve body is connected to the keg unit.

There is also provide an adapter, also including two-spring biased, registering one-way valves and bores leading thereto to accomodate the tubular prongs of a commonly used attachment, whereby when the adapter is unplugged, the valves thereof will close and prevent escape of air or beer.

1 Claim, 2 Drawing Figures

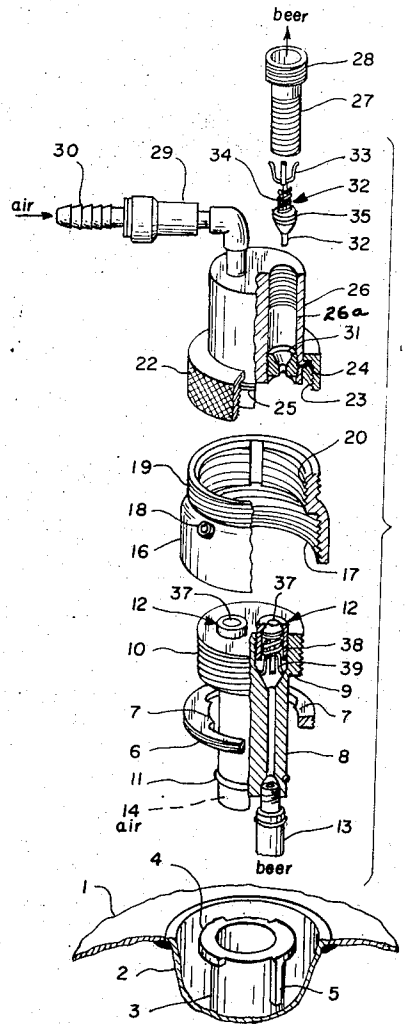


Fig.1.

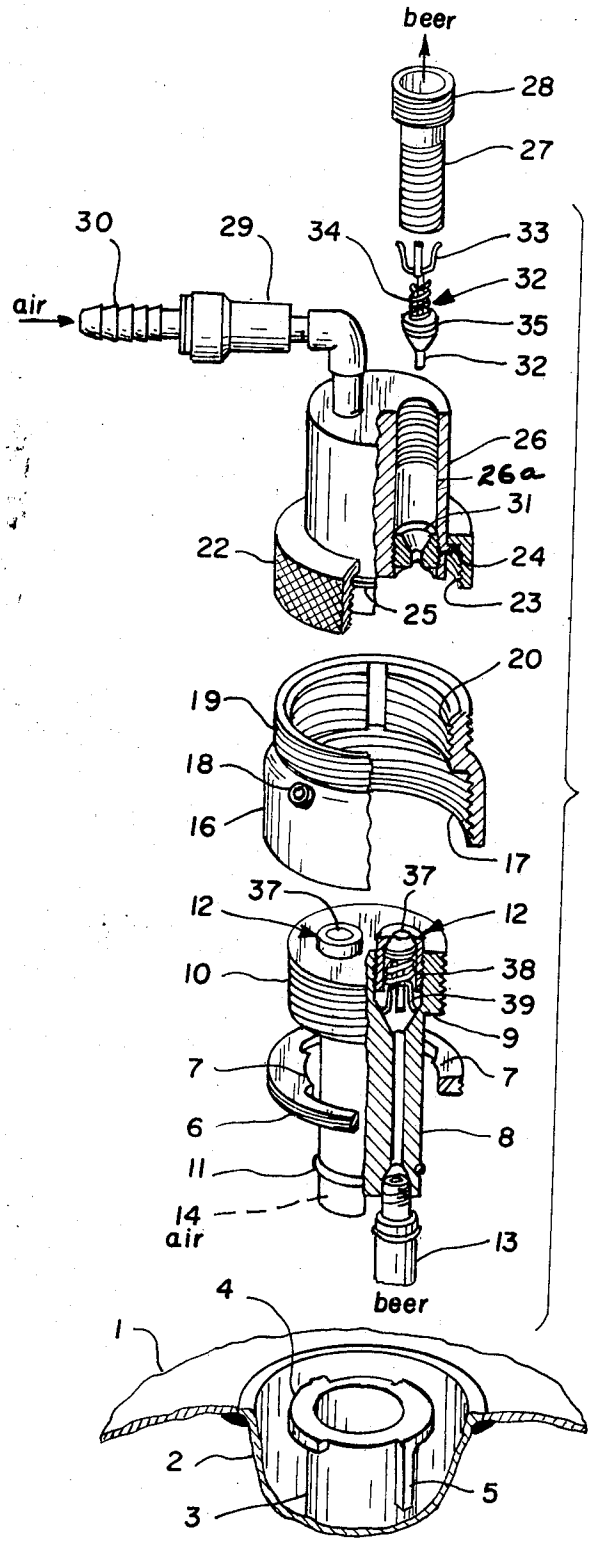
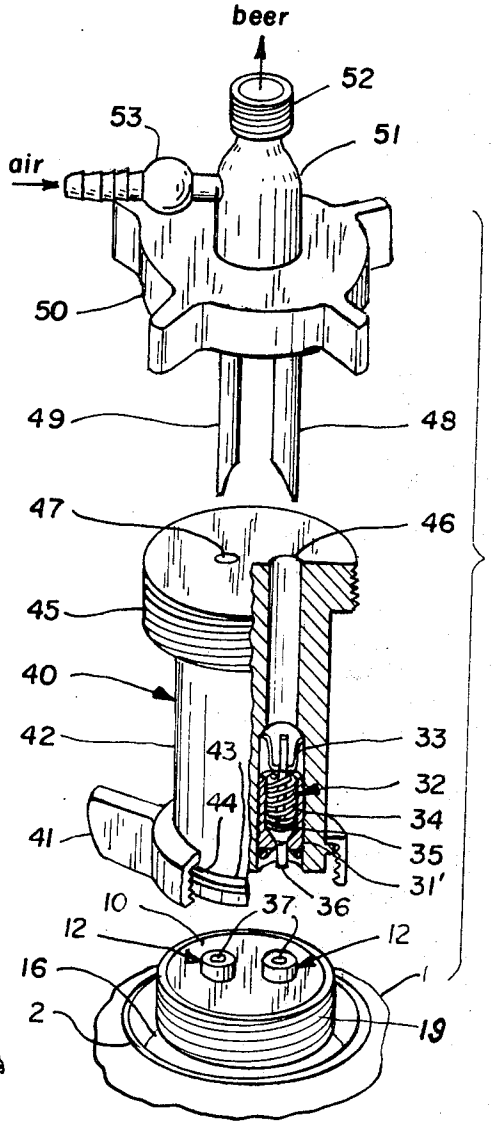

beer
28
27
30
29
34
33
air
32
35
32
26
26a
31
22
24
25
23
20
19
18
16
17
37
37
12
12
10
38
39
9
7
7
6
8
11
14
air
13
beer
4
1
2
3
5

Fig.2.


beer
52
53
51
air
50
49
48
47
46
45
40
42
43
33
32
44
34
41
35
31'
10
37
36
12
12
16
1
2
19

TAPPING DEVICE FOR BEER KEGS

This applcation is a continuation-in-part of my application S.N. 190,796, filed Oct. 20, 1971, and relates generally to a beer dispensing attachment for beer kegs.

An outstanding disadvantage of keg units comprising valve units permanently attached to a beer keg along the axis thereof is that they are somewhat complicated in design and do not provide sufficient safety features, such as assured interruption of the air and beer flow when a copuling unit, connected to the compressed air and beer, is disconnected from the keg unit.

Another disadvantage is that the keg unit is not adaptable for connection except to very specially constructed attachments.

An object of the present invention is to provide a novel keg unit and novel attaching unit therefor which will assure interruption of the beer and air flow upon disconnection of the attaching unit, —also which, by means of an adapter, can be connected to other types of attachments as more commonly used in the art.

A specific object of my invention is to provide a novel permanent keg unit and a novel attachment therefor which enables selective attachment of the aforesaid attachment or another commonly used attachment provided that it be first inserted into an adapter embodying the present invention.

Other objects and advantages will become more apparent from a study of the following description taken with the accompanying drawing wherein:

FIG. 1 is a top, perspective, exploded view with parts shown broken away, of an attachment assembly for mounting on and connection to a beer keg; and

FIG. 2 is a top, perspective veiw of a modified attachment which can be used instead of that shown in FIG. 1 provided it be first plugged into an adaptor **40** which, in turn, is mounted on the keg unit shown below.

Referring more particularly to FIG. 1 of the drawing, numeral **1** denotes a keg, such as a well known metal keg, having an opening defined by well portion **2** along its longitudinal axis and at the top end, into which is integrally mounted, such as by welding or braizing, the sleeve **3** having an integral bayonet joint **4** and longitudinal flanges **5**. A hole is provided axially of the well portion at the periphery of which the bottom portion of sleeve **3** is integrally secured to the well portion **2**. The external threads **10** of valve body **10** are screwed onto the internal threads **20** of cap **16** to form an assembly.

An externally threaded ring **6** has radially inwardly extending projections **7** adapted to fit through the gaps between the bayonet joints **4** before threading of the sleeve **6** to the internal threads **17** of collar **16** to lock the assembly in place. A depending hose **13** is attached to the bottom of a beer passage or bore in well **2** as shown in FIG. **2** for extension to the bottom portion of the beer keg **1**.

Two one-way valves **12, 12** are provided in vertically extending parallel openings **38** in the valve body **8**. each one-way valve comprises a valve seat **37** which is normally seated by the action of the spring **38** which is supported on a spring retaining spider **39** seated in a conical shaped portion of the bore leading to the beer hose **13**. The assembly described thus far is shown at the bottom of FIG. **2** in assembled condition.

Referring again to FIG. **1**, there is shown an attachable fitting **26**. Fitting **26** has a one-way valve seat **31** of conical configuration into which is fitted a valve **32**,

35 normally held in closed position by the action of spring **34** which is connected to a spider retainer **33**. An externally threaded sleeve **27, 28** is screw threaded to the internal threads of the bore **26***a* of valve body **26** which provides a direct connection to the beer spigot (not shown). valve body or fitting **26** is also connected, through a bore parallel to bore **26***a* containing a one-way valve similar to **32**, to a source of air under pressure by means of an elbow and fitting **29** which contains a one-way valve to permit compressed air to flow only toward the keg. This prevents beer rising if the keg air pressure is higher than the line pressure. Fitting **29** is connected to a serrated terminal **30** onto which an air hose is slip-fitted so as to introduce air under pressure through the last mentioned bore (not shown) into the valve body **11** when fitting **26** is connected to valve body **8** shown in FIG. **1**. Preferably, bore **26***a* which conducts beer should be of larger diameter than the compressed air bore to prevent the possibility of interchanging connections.

In operation, and as the result of the above described construction, when valve body **26** is detached from the keg **1**, by unscrewing the internal threads **23** of sleeve **22** from threads **19**, the valves **32** will automatically move to the closed position under the action of their springs **34** to prevent loss of beer otherwise flowing downwardly from the spigot and the loss of compressed air which normally travels downwardly of the air port in valve body **26**.

Similarly, the one-way valves **12** of the permanent keg attachment **8** will close the air and beer ports to onfine the air and beer in the keg.

If it should be desired to connect the type of unit shown at the top of FIG. **2**, and adapter **40** is employed, illustrated centrally of FIG. **2**, which adapter, in turn, is connected to the keg unit **10** in the manner to be described.

The well known unit shown at the top of FIG. **2**, illustrated and described in U.S. Pat. No. 3,228,413, comprises a screw cap **50** which turns about an upstanding valve body **51** having two terminals namely, an outlet terminal or tube **52** leading to the beer spigot and an inlet tube or terminal **53** leading to a source of compressed air. It also has two depending tubes **48** and **49** with tapered ends connected to the air connection **53** and beer connection **52**, respectively,

The tubes **48** and **49** are projected into an adaptor **40** through bores **46** and **47**, respectively, to complete the beer and air connections respectively, through the attachment **40**.

The attachment **40** is first detachably mounted on the keg unit by grasping radially outwardly extending flanges **41** and turning of the internally threaded screw ring on shoulder **44** as a bearing so as to be screw threaded onto the external threads **19** of the valve body **10**. In so doing, the two respective valves **37** of the keg or tavern unit **8** will cause the two stems **36** (only one of which is shown) which normally close the beer and air connections in keg unit **8** to rise against the action or tension of spring **34**, which are being compressed, so that both the air and beer connections will be in the valve open position.

When the valve body **40** is detached from the keg unit by unscrewing the screw ring, obviously springs **34** will cause both valve stems **36** to move downwardly to move the valves **35** to the closed position so as to prevent loss of air pressure or of beer. Also valves **37** will

automatically move to the closed position under the action of the springs **38.**

When either valve body **26** or adapter **40** is attached to valve body **8** of the keg unit, both the one-way valves **12,12** of the keg unit and the contacting one-way valves **32,32** in the valve body **26** (or the one-way valves **32,32** in adapter **40**) are all opened since the tensions of springs **34,34** and **38,38** are balanced or perhaps **34,34** are slightly higher to initiate opening of all four valves for either type connection.

Thus it will be seen that I have provided an efficient and fool-proof keg unit to which an attachment may be easily and detachably secured, which attachment includes two-one way valves to prevent upward flow of beer in the event that air pressure in the keg is higher than the line pressure and to prevent loss of air pressure, when the attachment is connected to the keg unit; furthermore, I have provided a novel adapter which may be substituted for said attachment for performing the same functions thereof except that it is so constructed as to enable plugging in of a commonly used type of attachment having two tubular prongs of different diameter with tapered ends which will fit into said adapter, also whereby when such last mentioned pronged attachment is detached, neither beer nor air pressure can escape through the adapter, thereby saving possible loss of beer and air pressure.

While I have illustrated and described a single specific embodiment of my invention, it will be understood that this is by way of illustration only, and that various changes and modifications may be contemplated in my invention and in the scope of the following claims.

I claim:

1. In combination with a beer keg having a keg unit mounted axially at one end, said unit including two spring-biased valves in ports of said unit through which compressed air and beer flow respectively; and a valve body attachment including two correspondingly positioned spring-biased one way valves, the corresponding valves mutually actuating each other within ports leading to a source of air under pressure and to a beer spigot, respectively, whereby when the valve body attachment is detachably fastened to said keg unit, it will effect opening of all four of the spring pressed valves of the attachment and keg unit to permit the flow of air under pressure and beer, said valve body attachment being in the form of an adapter having two vertically extending parallel bores and a plug-in tap unit having air and beer connections to a source of air under pressure and to a beer spigot, which plug-in unit comprises a pair of tubular prongs with tapered ends which are detachably and snugly fitted to said parallel bores of said adapter above said valves.

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