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BEER DISPENSER

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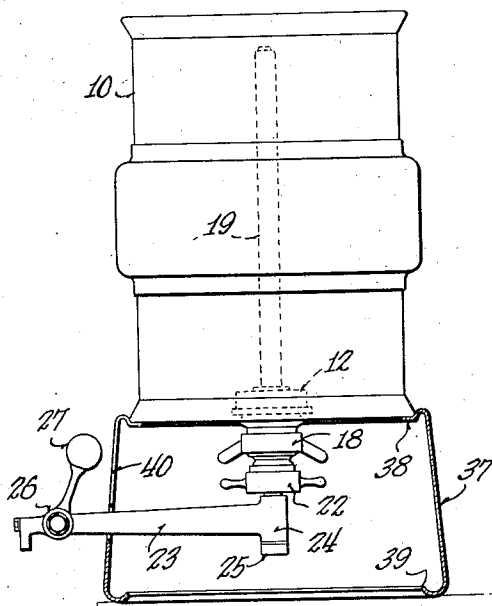


Fig. 1

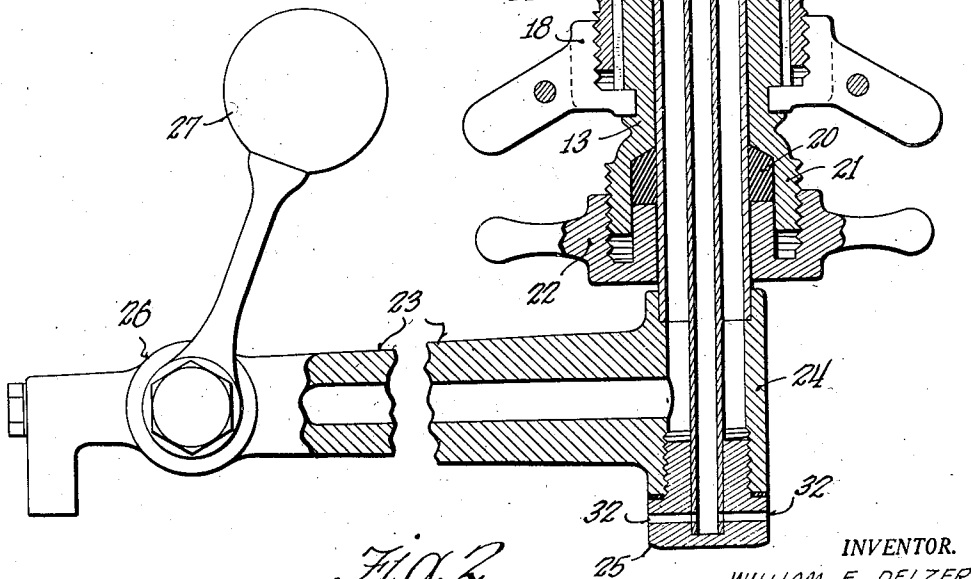


Fig. 2

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BEER DISPENSER

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1 Claim. (Cl. 225—3)

This invention relates to beer dispensers.

The dispenser of the present invention is particularly adapted for home, club, picnic, or other uses where bar facilities are not available for the serving of draft beer.

An object of the present invention is to provide a dispenser readily applicable to present commercial forms of kegs and the like and capable of discharging beer therefrom without the necessity of using hand pumps or other types of pressure devices heretofore required in dispensing equipment heretofore available.

Other more specific objects and advantages will appear from the following description of an illustrative embodiment of the present invention.

In the accompanying drawing:

Figure 1 is a side elevation of a modern metal beer keg equipped with a dispenser constructed in accordance with the present invention.

Fig. 2 is a sectional view on a larger scale of the dispenser shown in Fig. 1.

The dispenser selected for illustration is shown applied to a conventional steel keg 10 having a double-walled end head 11 with standard tap bushing 12 fixed in the center thereof. The bushing 12 is adapted to receive a well known type of tap 13 having a conventional clamp ring 14 with lugs 15 for gripping engagement beneath an interrupted flange 16 on the central hollow nipple 17 of the bushing. The clamp ring 14 is actuated and controlled by the usual winged collar 18 rotatably engaged with the body of the tap and in screw threaded engagement with the clamp ring 14. The bushing 12 and tap 13 provides a convenient means for removably attaching the dispenser to the keg 10.

The dispenser shown includes a conventional tap rod 19 extending through the tap 13 and frictionally gripped by a sealing gasket 20 contained in a packing gland 21 and compressed against the tap rod by a nut 22 threaded on the tap. In this instance the tap rod 19 carries a discharge conduit 23 attached to the outer end thereof through a hollow fitting 24 formed integral with the conduit, the fitting also providing communication between the rod and conduit. One end of the fitting 24 is fixed to the end of the rod and the other end is closed preferably by a screw plug 25, which is removable to afford access to the interior of the rod and conduit for cleaning purposes. The conduit 23 extends radially from the tap rod and is equipped with a discharge faucet 26 of any known or approved design controlled by a suitable handle 27.

As indicated in Fig. 1 the tap rod 19 is prefer-

ably of such length as to extend to a point adjacent the far end of the keg 10, so that when the keg is inverted, the upper end of the tap rod is adjacent or above the level of the liquid within the keg. At its upper or far end the tap rod is equipped with a perforated tip 28 which in this instance is screwed or otherwise removably attached to a tubular element 29 fixed in the tap rod. The interior of the tap rod 19 is open to the contents of the keg through a series of ports 30 formed in the rod where they may assume a position adjacent the lower end of the keg when the latter is inverted. The arrangement is such that the contents of the keg may discharge through the ports 30, rod 19, conduit 23, and faucet 26 when the latter is opened.

In order to permit such discharge from the inverted keg provision is made for venting the upper end thereof. The means for that purpose is an integral part of the dispenser and is so constructed and arranged as to effect free admission of atmospheric air to the keg without permitting leakage of the beverage from the keg. In the dispenser shown this means comprises a vent tube 31 fixed at one end in the plug 25 and communicating with the atmosphere through radial ducts 32 in the plug. The tube 31 extends lengthwise of the tap rod 19 into the tip 28 where it is normally closed by an appropriate check valve 33. It will be noted that with the check valve 33 thus disposed adjacent or above the level of the beverage in the keg (when inverted) the valve is not subjected to any material external pressure from the beverage and is therefor free to open under atmospheric pressure to admit air therethrough to the keg. At the same time the valve 33 prevents entry of the beverage into the vent tube 31.

The check valve 33 is of a well known type comprising a tubular body portion 34 of rubber terminating in a flat longitudinally slitted end 35 which is normally closed but which is expandable under internal fluid pressure to permit fluid to escape through the slit. The check valve 33 is shown applied to the vent tube 31 with its tubular body portion 34 encircling the end of the tube to seal the same. For a purpose which will later appear, the element 29 is provided with a reduced portion 36 loosely surrounding the vent tube 31 and encircled by the body portion 34 of the check valve to seal the annular clearance between the tube 31 and the reduced portion 36 of element 29.

The dispenser shown may be applied to any standard keg and prepared for use as follows. The tap 13 is first applied and secured to the bushing 12 in the usual manner and, with the

faucet 26 closed, the free end of the tap rod 19 is entered into the tap 13, and the nut 22 is rotated to press the gasket 20 into light sealing contact with the tap rod. The tap rod 19 is then forced lengthwise through the tap into the barrel substantially into the position illustrated, forcing ahead of it the cork (not shown) which normally closes the passage through the nipple 17. The gasket 20 is thereafter compressed into tight gripping engagement with the tap rod 19 and the keg is then placed in inverted position upon an appropriate stand 37 and the dispenser is ready for use. Whenever the faucet 26 is opened by manipulation of the handle 27, beverage from the keg flows by gravity through the ports 30, tap rod 19, and conduit 23 to and through the faucet, the top of the inverted keg being vented by air which enters through the ducts 32 to the tube 31 and passes through the valve 32 and ported tip 28 into the interior of the keg.

It will be noted that during the advance of the tap rod 19 into the keg, and before the ports 30 have passed inwardly beyond the sealing gasket 20, beverage entering the ported tip 28 might pass lengthwise through the tap rod and escape through the ports 30, unless some provision were made to prevent such flow. In the dispenser shown, this difficulty is avoided by the seal provided in the manner above described by the body portion 34 of the check valve. Since the body 34 of the valve effectively closes the clearance between the tube 31 and member 29, there is no communication between the ported tip 28 and the interior of the tap rod 19.

The stand 37 may of course assume various

forms, but that shown is of simple inexpensive design and has proven quite satisfactory for the purpose. It comprises a hollow sheet metal structure of ring-like form having an upper inwardly directed flange 38 providing a seat for the keg 10 and an inwardly turned lower flange 39 forming an appropriate mounting base. The stand 37 is of sufficient height to support the conduit 23 and faucet 26 clear of the mounting surface, and is preferably slotted, as at 40, or otherwise fashioned to accommodate the radially extended conduit 23.

Various changes may be made in the embodiment of the invention hereinabove specifically described without departing from or sacrificing the advantages of the invention as defined in the appended claim.

I claim:

In a beverage dispenser the combination of a tap rod having a ported tip at one end for projection into a beverage container, said tap rod also having means intermediate the ends thereof for admitting beverage from said container thereto, a discharge faucet carried by the opposite end of said tap rod and communicating therewith, a removable closure for said last named end of said tap rod, a vent tube carried by said closure and extending lengthwise of and within said tap rod, a beverage excluding check valve within said ported tip for admitting air from said vent tube to said container, and means for detachably supporting said tap rod in position with said ported tip and said beverage admission means within said container.

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