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BEVERAGE FAUCET AND ADJUSTABLE FLOW RESTRICTOR

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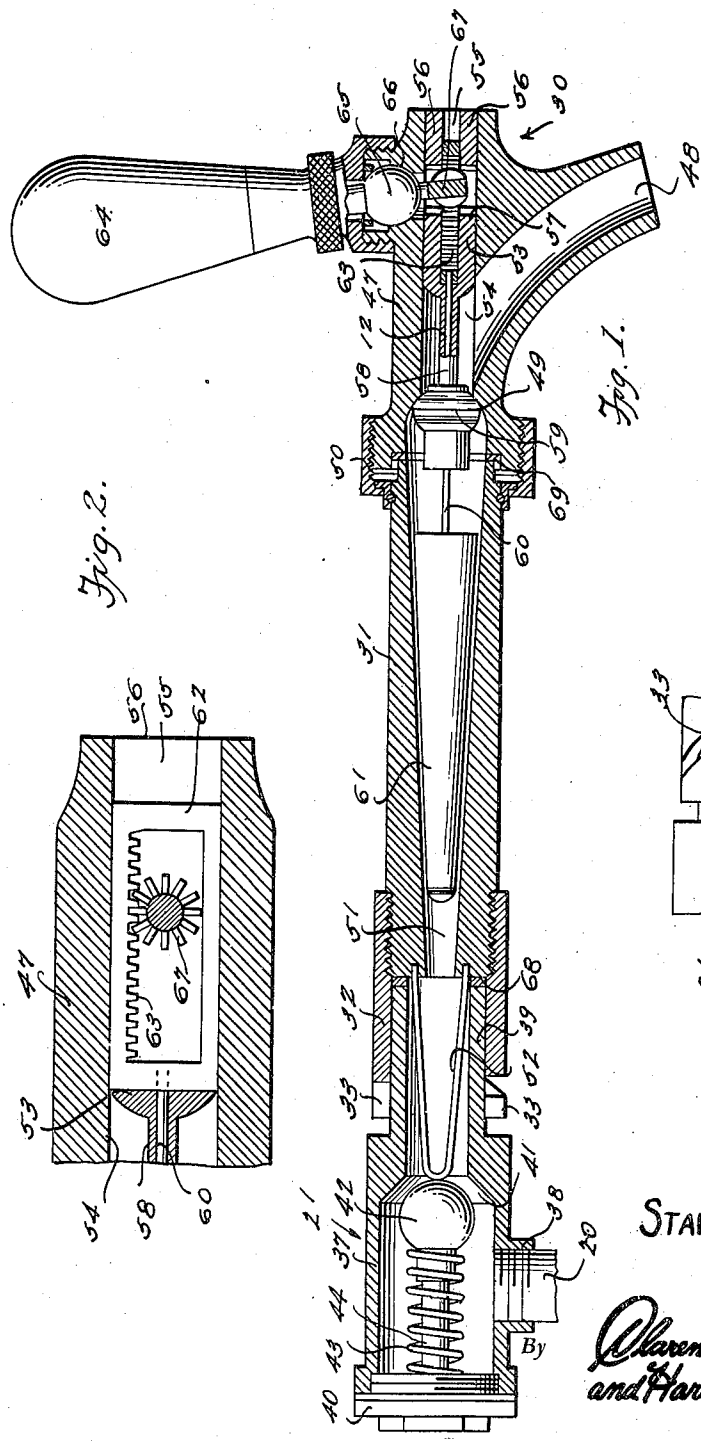


Fig. 1.

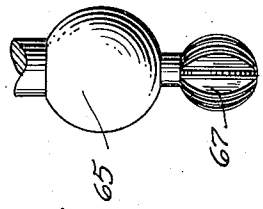


Fig. 4.

Fig. 2.

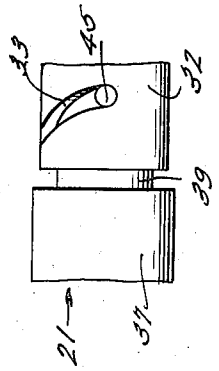


Fig. 3.

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BEVERAGE FAUCET AND ADJUSTABLE FLOW RESTRICTOR

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7 Claims. (Cl. 225—1)

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The present invention relates to new and useful improvements in beverage dispensers, particularly for beer, and has for its primary object to provide, in a manner as hereinafter set forth, a device of this character in the form of a complete, portable, self-contained unit which is adapted to be delivered from the brewery ready to dispense beer.

Another very important object of the invention is to provide a dispenser of the aforementioned character which embodies novel means for refrigerating the beverage and maintaining same at the desired temperature over a long period of time.

Still another important object of the invention is to provide a dispensing unit of the character set forth comprising a faucet including unique means for controlling the discharge of the beverage and, in the case of beer, regulating the foam thereof.

Other objects of the invention are to provide a portable beverage dispensing unit of the character described which will be comparatively simple in construction, strong, durable, compact, light in weight, and which may be manufactured at low cost.

All of the foregoing, and still further objects and advantages of the invention, will become apparent from a study of the following specification, taken in connection with the accompanying drawings, wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in vertical longitudinal section through the faucet.

Figure 2 is a view in horizontal section through the forward end portion of the faucet, taken substantially on the line 12—12 of Figure 1.

Figure 3 is a fragmentary view, showing the detachable connection of the faucet to the check valve.

Figure 4 is an enlarged fragmentary view showing a detail of construction.

Specific reference will now be made to the drawings. In the several views, similar reference characters indicate corresponding elements throughout.

Mounted vertically in a beverage container (not shown) is a dispensing tube, pipe or rod 20 which extends downwardly into said barrel through the top thereof. A check valve 21 is mounted horizontally on the upper end of the tube, pipe or rod 20. The valve 21 includes a substantially tubular casing 37 having formed therein at an intermediate point a threaded

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opening 38 whereby said casing may be screwed horizontally on the upper end portion of the tube, pipe or rod 20. The casing 37 includes a reduced end portion 39. A removable screw plug 40 closes the other end of the casing 37. Formed in the casing 37 is a seat 41. A ball valve 42 is engageable with the seat 41. The ball valve member 42 is mounted on one end of a coil spring 43 which, in turn, is mounted on the screw plug 40. Projecting from the screw plug 40 is a guide pin 44 for the coil spring 43 and the ball valve member 42. Of course, the spring 43 closes the ball valve member 42. Pins 45 project from the reduced portion 39 of the casing 37, the purpose of which pins will be presently set forth.

The front of the beverage container has formed therein an opening which accommodates a removable faucet which is designated generally by reference character 30. As illustrated to advantage in Figure 1 of the drawings, the faucet 30 includes a barrel 47 of suitable material having formed integrally therewith a depending spout 48, said barrel being open at its ends. Adjacent one end, the barrel 47 has formed therein a seat 49. Removably mounted on this end of the barrel 47 is a tubular shank 31. A coupling 50 connects the members 47 and 31. The bore of the tubular shank 31 is tapered in a manner to provide a seat 51 or tapered control space or passage in connection with a tapered valve or restrictor 61 to be later described. A coupling 32 is mounted on one end portion of the shank 31 and projects longitudinally therefrom. The coupling 32 has formed in one end portion cam slots 33 which receive the pins 45 for detachably connecting the faucet 30 to the casing 37 of the valve 21. Also mounted on this end of the shank 31 is a substantially U-shaped wire finger 52 which is insertible in the reduced portion 39 of the casing 37 for engaging and unseating the ball valve member 42 against the tension of the coil spring 43 when the faucet 30 is connected to the member 21.

The faucet 30 further includes a piston 53 which is mounted for reciprocation in the bore 54 of the barrel 47. Extending longitudinally into the piston 53 from the forward end thereof is a slot 55 providing bifurcations 56. A vertical opening 57 in the piston 53 communicates with the slot 55. Projecting longitudinally from the rear end of the piston 53 is a tubular stem 58. A valve member 59 is provided on the stem 58 for engagement with the seat 49.

A metallic rod 60 extends slidably through the tubular stem 58 into the slot 55 in the piston 53.

Fixed on the rod 60 and operable in the shank 31 is a tapered valve member or restrictor 61. The valve or restrictor 61 is cooperable with the tapered seat or bore 51 of the shank 31 for controlling or regulating the foam of the beer. Fixed on the other end portion of the rod 60 for operation in the slot 55 is a substantially rectangular frame 62 (see Fig. 2) comprising, on one of its longitudinal sides, a rack bar 63. The frame 62 fits tightly between the bifurcations 56 and is frictionally retained in longitudinally adjusted position thereby.

An operating lever in the form of a handle 64 is mounted for swinging and rotary movement on the forward end portion of the barrel 47. Toward this end, the handle 64 is provided, on its lower end, with a ball 65 which is journaled in a socket structure 66 which is provided therefor on the barrel 47. Fixed beneath the ball 65 is a substantially spherical pinion gear 67 which is engaged with the rack bar 63 in the frame 62 and which the opening 57 in the piston 53 accommodates. Thus, the piston 53 is frictionally connected to the handle 64 for reciprocation thereby for opening and closing the valve member 59.

In practical operation, the faucet is inserted in the beverage container for connection to the check valve 21. The coil spring 43 engages the ball valve member 42 on the seat 41 for preventing the discharge of beverage through the faucet 30. The coupling 32 is slipped on the reduced portion 39 of the casing 37 and, with the pins 45 engaged in the cam slots 33, the faucet 30 is turned. Thus, the shank 31 is drawn tightly against the opposed end of the casing 37 and the finger 52 engages and unseats the ball valve member 42. A gasket 68 in the coupling 32 prevents leakage between the members 39 and 31. A substantially similar gasket 69 is provided between the members 31 and 47. When the pins 45 engage the closed ends of the cam slots 33, the spout 48 extends downwardly from the barrel 47.

To dispense the beer, the handle 64 is swung forwardly for disengaging the valve member 59 from the seat 49, thus opening the faucet 30. When this occurs, the valve 61 moves toward the tapered bore or seat 51 but does not contact the same. The rod 60 supports the valve or restrictor 61 in the shank 31 in spaced, concentric relation to the tapered bore or seat 51 at all times when the faucet is in position, but is closed against the seat when the faucet is removed, or until the faucet is attached. To close the faucet 30, the handle 64 is, of course, swung in the opposite direction for again engaging the valve member 59 with the seat 49. As hereinbefore mentioned, the valve or restricter 61, in conjunction with the tapered bore or seat 51, controls or regulates the foam of the beer. To adjust the valve 61, the handle 64 is rotated on the barrel 47. In this manner the rack bar 63 is actuated longitudinally in the slot 55 between the bifurcations 56 of the piston 53 for moving the valve or restricter 61 longitudinally in the shank 31 or, stated otherwise, toward or away from the seat 51. The spherical shape of the pinion permits it to mesh with the rack regardless of the angular position of handle 64.

It is believed that the many advantages of a beverage dispenser constructed in accordance with the present invention will be readily understood, and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

1. A beverage dispenser comprising a faucet including a barrel, a spout on the barrel, a seat in said barrel, a tubular shank mounted on the barrel, a tapered bore in said shank, a valve member in the barrel engageable with the first-named seat, a tapered restrictor member operable in the shank and cooperating with the tapered bore to restrict the space between the bore and the restrictor member, and common means on the barrel for simultaneously moving the valve member away from the seat and the tapered restrictor member toward the tapered bore, and for adjusting said tapered restrictor member toward or away from said tapered bore independently of said valve member.

2. A beverage dispenser comprising a faucet including a barrel, a tubular shank mounted on said barrel and having a tapered bore, a piston mounted for reciprocation in the barrel, a valve mounted on said piston, a rack bar mounted for longitudinal sliding adjustment in the piston, said rack bar being frictionally engaged with said piston for retention in adjusted position, a tapered restrictor connected to the rack bar and operable in the shank to regulate the space between the tapered restrictor and the tapered bore, a handle pivotally and rotatably mounted on the barrel, and a gear on the handle engaged with the rack bar for connecting the valve and restrictor to the handle for simultaneous actuation thereby upon swinging movement of said handle, and for adjusting the tapered restrictor in the shank independently of the valve on the piston upon rotation of the handle.

3. A beverage dispenser comprising a faucet including a barrel, a tubular shank mounted on said barrel, opposed seats in the barrel and shank, a piston mounted for reciprocation in the barrel, a stem projecting longitudinally from one end of the piston, a valve on said stem engageable with the barrel seat, the piston having a longitudinal slot therein, a frictionally retained rack bar mounted for sliding adjustment in the slot, a rod connected to the rack bar and extending slidably through the stem and the valve, a valve on said rod movable toward and away from the shank seat, a lever pivotally and rotatably mounted on the barrel, and a spheroid gear on the pivoted end of the handle engaged with the rack bar for connecting the valves to said handle for simultaneous actuation thereby, said gear further constituting means for connecting the shank valve to the handle for adjustment thereby independently of the first-named valve upon rotation of said handle.

4. A beverage dispenser including a barrel, a spout on the barrel, a seat in said barrel, a tubular shank mounted on the barrel, a tapered bore in said shank, a valve member in the barrel engageable with the first-named seat, a tapered restrictor operable in the shank and cooperating with the tapered bore to restrict the space between the bore and restrictor, and operating means on the barrel rotatably and pivotally mounted to seat and unseat the valve by pivotal movement thereof, said operating member being operatively connected to the valve and to the restrictor, to operate the latter by rotation thereof to adjust the restrictor toward and away from the tapered bore independently of the valve.

5. A beverage dispenser comprising a barrel, a tubular shank on said barrel having a tapered

bore, a piston mounted for reciprocation in the barrel, a valve mounted on said piston, a tapered restrictor cooperating with the tapered bore, a handle pivotally and rotatably mounted on the barrel and operatively connected to the valve to seat and unseat the same by pivotal movement of the handle and operatively connected to the tapered restrictor to regulate the space between the same and the tapered bore by rotation of the handle and adapted to be actuated simultaneously or independently to regulate the discharge into the shank and from the valve.

6. A beverage dispenser comprising a faucet, said faucet including a valve member, a tubular shank on the faucet having a tapered bore, a tapered restrictor operable in the shank and cooperating with said bore, and common means on the faucet for slidably actuating the valve members in unison by movement in one direction and for adjusting the tapered restrictor in the tapered bore independently of the valve member by movement in another direction.

7. A beverage dispenser comprising a faucet, said faucet including a valve member, a tubular shank on the faucet having a tapered bore, a tapered valve member operable in the shank and cooperating with said bore to form a restricted passage therethrough, and an operating handle

on the faucet having operative connection with each of said valve members to open the first-named valve member by swinging movement thereof and to adjust the second-named valve member with respect to the tapered bore by rotation thereof, independently of the first-named valve member.

STANLEY J. McCLURE.

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