April 18, 1944. R. A. RIESGO 2,347,123

BEVERAGE DRAUGHT APPARATUS

Filed June 8, 1942

FIG. 1.

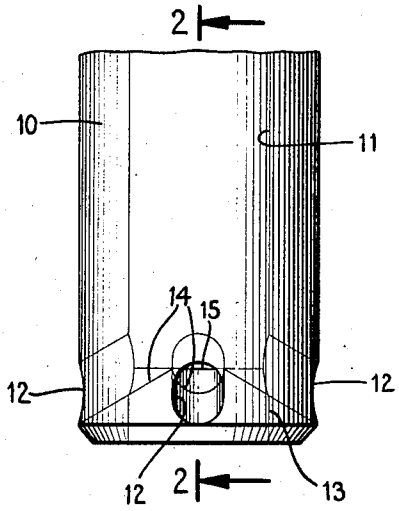
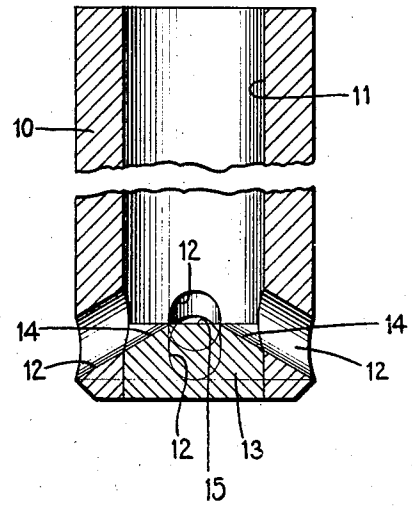


FIG. 2.



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BEVERAGE DRAFT APPARATUS

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2 Claims. (Cl. 225—3)

This invention relates to draft equipment of the type used for dispensing beverages, and relates more particularly to improvements in tap rods.

Many different types of beverage tap rods have been provided for dispensing beer and other beverages from kegs and the like, but each of these various types of rods has had certain disadvantages. For example, certain types of these tap rods are provided with opposed radially-extending inlet ports communicating with a central passageway into which the beer is drawn from the keg. The streams of beer flow into the tap rod from opposite directions, impinge upon each other and cause the beer to foam undesirably. Moreover, the interiors of such tap rods have corners, angles, or shoulders therein in which bacteria can lodge, with the result that fermentation may take place. Usually these rods and their tips are made of brass or copper, and as these tips sometimes become detached and fall into the keg, it has become the practice to secure them tightly, as by soldering or welding the end of the tube, with the result that they cannot be removed and can be cleaned properly only with considerable difficulty.

An object of the present invention is to provide beverage tap rods which overcome the difficulties of the prior art tap rods pointed out above.

Another object of the invention is to provide inlet apertures for tap rods which are so positioned and arranged as to preclude foaming of the beverage as it is withdrawn from the keg and which are self-cleaning.

Other objects of the invention will become apparent from the following description of a typical form of tap rod employing the present invention.

Beverage tap rods embodying the present invention are characterized by the presence of a plurality of inlet apertures which are mutually inclined. This mutual inclination of the inlet apertures causes a smooth, non-turbulent merging of the streams of the beverage entering the rod, thereby minimizing agitation and consequent foaming of the beverage. This mutual inclination and arrangement of the inlet apertures also causes the beverage to flow through the apertures in such a way as to scour the apertures and adjacent portions of the tip and prevent accumulation of bacteria or fermentable solids or colloids therein.

For a better understanding of the present invention, reference may be had to the accompanying drawing, in which:

Figure 1 is a view in side elevation of a typical form of tap rod embodying the present invention; and

Fig. 2 is a view in vertical cross-section taken on line 2—2 of Fig. 1 and partly broken away.

The form of tap rod chosen for purposes of illustration of the present invention, may be made of any suitable material, such as metal, plastic, or the like.

As shown in Fig. 1, the tube 10 is of a substantially constant cross-sectional area and is provided with a central bore 11 through which the beverage is withdrawn. Adjacent to the lower end of the nozzle 10 are a plurality of mutually inclined apertures 12 which extend through the wall of the tube and communicate with the central bore 11. The mutual inclination of the apertures 12 may be with respect to the axis of the tube as shown, or at an angle to the radius of the tube in a horizontal plane, and this mutual inclination is of considerable importance inasmuch as the streams of beverage entering the apertures 12 do not impinge upon each other and hence preclude foaming of the beverage. Therefore, where the apertures 12 are inclined inwardly and upwardly with respect to the axis of the nozzle 10, the arrangement should be at an acute angle. The same result obtains when the apertures 12 may be alternatively inclined to a radius of the rod in the horizontal plane, or inclined both to the axis and to the radius.

In the form shown the lower end of the rod 10 is provided with a plug 13 which may be formed separately and secured in or to the end of the tube, or formed as an integral portion thereof. This plug 13 is partially traversed by the apertures 12 so as to form channels 14 therein extending upwardly toward the axis of the nozzle 10. These channels 14 terminate at the top of the plug in slightly spaced apart relationship leaving a small flat portion 15 in the center of the plug 13, as illustrated in Fig. 2.

In operation, the inward flow of the liquid through the apertures 12 results in the liquid scouring the interior of the apertures 12, the passages 14, the upper portion of the plug 13 so that bacteria and other material cannot accumulate in the tap rod tip. This self-cleaning function of the device is highly important inasmuch as it prevents fermentation taking place in the tap rod and "off" flavors cannot be imparted to the brew or the brew contaminated by the materials which would normally accumulate in the rod.

The number of apertures 12 can be varied as desired. Preferably four apertures are provided

in order to permit the liquid to be dispensed in adequate volume by using multiple apertures. The flow through the mutually inclined apertures is sufficient under all operating conditions to keep the rod clean and free from accumulated sediment, and the tip is not unduly weakened by the presence of the apertures.

It will be understood that the size of the apertures may be varied as the purpose demands and that the types of materials from which the rod is constructed may be varied widely. Therefore, the form of the invention disclosed herein should be considered as illustrative and not as limiting the scope of the following claims.

I claim:

1. A tap rod comprising a tubular member of annular cross-section having a central bore substantially of uniform diameter throughout and a closed end, and means forming a plurality of angularly related, upwardly inclined and converging apertures extending inwardly through the sides of said member and through the closed end to form open, inclined, converging channels in said closed end extending from the sides of said member substantially to the center of said closed end, said rod being free from internal shoulders and corners wherein solids and colloids can lodge and having all inner surfaces in the line of flow of the liquid through said apertures, channels and bore.

2. A tap rod comprising an elongated tubular non-metallic member of substantially uniform annular cross-section throughout its entire length having a central bore and a closed end, means forming a plurality of radially extending, upwardly inclined and converging apertures extending inwardly through the sides of said member and through the closed end to form open, inclined, converging channels in said closed end extending from the sides of said member substantially to the center of said closed end, said rod being free from shoulders and corners wherein solids and colloids can lodge and having all inner surfaces in the line of flow of liquid through said apertures, channels and bore.

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