Oct. 23, 1956 J. BEERMAN 2,767,744

LIQUID TRANSFER DEVICE

Filed Dec. 27, 1954

Fig. 1

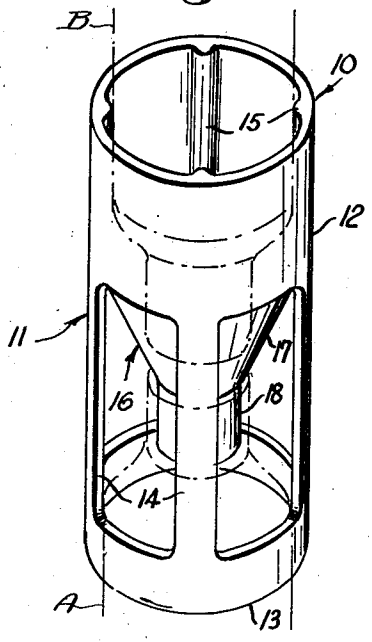


Fig. 2

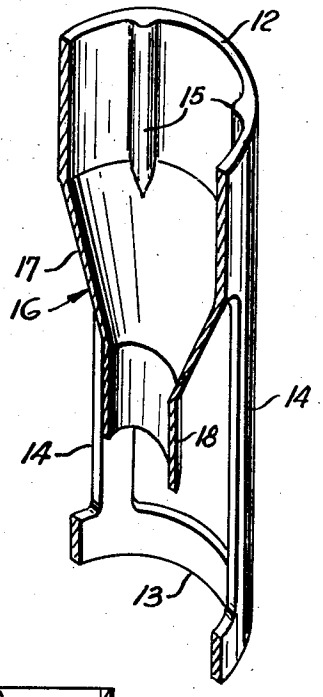
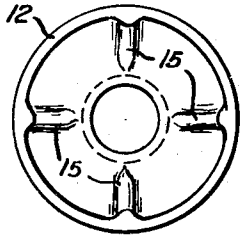


Fig. 3



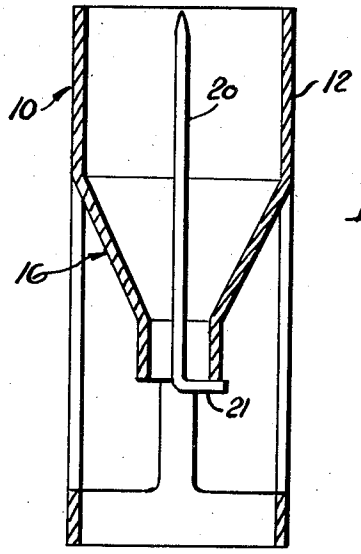


Fig. 4

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LIQUID TRANSFER DEVICE

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2 Claims. (Cl. 141—319)

This invention relates to a novel fluid transfer apparatus, more particularly a fluid transfer apparatus designed to facilitate the transfer of relatively viscous fluids between containers having relatively narrow necks. The novel apparatus here presented is designed for particular use in conjunction with the transfer of comestibles, such as ketchup, between one container and another.

In food dispensing establishments, such as restaurants, cafeterias, luncheonettes, and the like, problems are engendered in the use of relatively viscous liquid condiments, such as ketchup, mustard and the like. These problems arise from the fact that conventional packaging for these condiments is done in clear glass bottles having a relatively narrow neck. The partially used bottle presents a messy appearance and is rather difficult to employ for application of its contents. The latter difficulty arises from the fact that the surface tension of the relatively viscous fluid is such as to preclude facility of flow through the neck of the bottle, thus making it necessary to shake the bottle vigorously, often with disastrous results. Waste results in that patrons of these establishments request full bottles, and waiters discard the partially filled ones.

It is with the above problems in mind that the present construction has been evolved, a construction serving to facilitate the ready transfer of viscous liquids from one narrow necked container to another, whereby these containers may always be maintained in a substantially filled condition, thus enabling the ready employment of the contents thereof.

It is accordingly a primary object of this invention to provide a novel apparatus for the transfer of viscous liquids.

Another object of this invention is to provide a novel fluid transfer apparatus particularly adapted to serve in maintaining containers for condiments, such as conventionally used in food dispensing establishments, in a filled condition.

It is also an object of this invention to provide a novel fluid transfer apparatus for use in conjunction with liquid condiment containers serving to facilitate the application of the contents of said containers to comestibles as desired.

A further object of this invention is to provide a novel apparatus particularly adapted to enhance the readiness with which ketchup is made available for use by restaurant patrons.

A still further object of this invention is to provide a novel fluid transfer apparatus simple in construction requiring minimum maintenance, and easily cleansable.

These and other objects of the invention which will become apparent from the following disclosure are achieved by provision of an elongate hollow tubular member adapted for engagement about the external periphery of the neck of a container. A funnel provided with spaced raised flutings is positioned within this tube and adapted for entry into the neck of one of said containers, the lower end of said funnel being provided with a tubular

extension of a length sufficient to extend substantially into the neck of said container.

This construction will be made most manifest in the following specification taken in conjunction with the drawings wherein:

Figure 1 represents a perspective view of the novel apparatus shown in use in conjunction with the transfer of ketchup between two bottles, the two bottles being partially illustrated in dot-dash line.

Figure 2 is a cross sectional perspective view through the novel fluid transfer apparatus.

Figure 3 is a top plan view of the novel fluid transfer device.

Figure 4 is a cross-sectional view through a modified embodiment of the fluid transfer apparatus.

Referring now more particularly to the drawings where like numerals in the various figures are employed to designate like parts, the novel device **10** is seen to comprise an elongate hollow tubular member **11** having an upper container engaging portion **12** and a lower container engaging portion **13**.

The lower portion **13**, as best seen in Figures 1 and 2, comprises a series of spaced peripheral ribs **14** formed by cutting away portions of the side walls of the tubular member.

The upper portion **12**, as clearly shown in Figures 1 and 2, is provided with vertically extending raised spaced flutings **15** whose function will be hereinafter described. It will be observed that the side wall of upper container engaging portion **12** is maintained as a continuous surface.

Provided between the upper and lower container engaging portions **12** and **13**, respectively, is a funnel **16**. This funnel **16** comprises conventional inverted cone **17** which at its upper edges engages the inner side wall of upper container engaging portion **12**. The lower constricted end of the funnel is provided with a downwardly extending tubular extension **18**. Previously described flutings **15** may be extended into the cone.

In Figure 4 is illustrated a modified embodiment of the herein disclosed inventive concept in which the funnel is modified so as to provide means for facilitating the flow of viscous fluids therethrough. It will be seen that a needle like projection **20** is supported on arm **21** mounted on the lower rim of extension **18**. Needle projection **20** extends upwardly through the funnel **16** into upper engaging portion **12**.

Operation

In operation when it is desired to transfer relatively viscous fluids from one container to another, this transfer may readily be accomplished by positioning the novel transfer apparatus so that lower container engaging portion **13** surrounds the neck of a container or bottle A, illustrated in Figure 1, in dot-dash lines. A second container or bottle B containing the viscous fluid which it is desired to transfer to container A is then inverted so that the neck of said container B is held by upper container engaging portion **12**.

It will be observed that the flutings **15** serve to provide a spacing between the inner side walls of portion **12** and container B, whereby air may pass into bottle B, thus permitting the flow of its contents. The funnel **16** extends down into container A, thus insuring that any fluid drained from container B will pass into container A.

Lower container engaging portion **13** is provided with the cutaways forming ribs **14**, so as to facilitate cleaning and lighten the weight of the structure.

Where, as is often the case in narrow necked bottles, the surface tension of the liquid forms a clogging bubble in the neck of the bottle, it may be found desirable to employ the modified funnel construction of Figure 4

where needle projection 20 extends into the neck of bottle B to pierce this bubble and enhance flow.

It is thus seen that a novel fluid transfer apparatus has been provided eminently suitable for application to restaurant use in maintaining ketchup bottles in a relatively filled condition and eliminating previously encountered waste resulting from the fact that waiters will discard partially used bottles of ketchup. The construction here provided permits the partially empty bottle to be inverted over another bottle, permitting the contents of said first bottle to drain into said other bottle. No particular care is required by the food handler, and maintenance of the apparatus is minimal, requiring only cleaning.

The above disclosure has been given by way of illustration and elucidation and not by way of limitation, and it is desired to protect all embodiments of the herein disclosed inventive concept within the scope of the appended claims.

What is claimed is:

1. A device for the transfer of ketchup and the like from one bottle to another bottle, said device comprising an elongate hollow tubular member having an upper annular bottle-engaging portion, a lower annular bottle-engaging portion, ribs extending between said portions and separated by openings formed in said member, said portions and said ribs having continuous outer cylindrical upper and lower surfaces, at least one of said portions having raised spaced flutings located within said hollow tubular member and extending in the direction of the longitudinal axis thereof, and a funnel located within said tubular member and extending from the lower edge of the upper portion toward the lower portion, said funnel comprising an inverted cone portion and a tubular extension constituting a continuation of said cone portion, the longitudinal axes of said cone portion and said tubular extension coinciding with the longitudinal axes of said tubular member, the lower edge of said tubular extension being located above the upper edge of said lower portion.

2. A device in accordance with claim 1, comprising a needle projection within said tubular member and extending in the direction of the longitudinal axis thereof, and an arm integral with said needle projection and carried by said tubular extension.

References Cited in the file of this patent

UNITED STATES PATENTS

213,244	Pettibone	Mar. 11, 1879
340,646	Westgate	Apr. 27, 1886
721,870	Edison	Mar. 3, 1903
865,572	Dawson	Sept. 10, 1907