March 8, 1955 A. L. VOIGHT 2,703,670

FUNNEL

Filed March 24, 1952

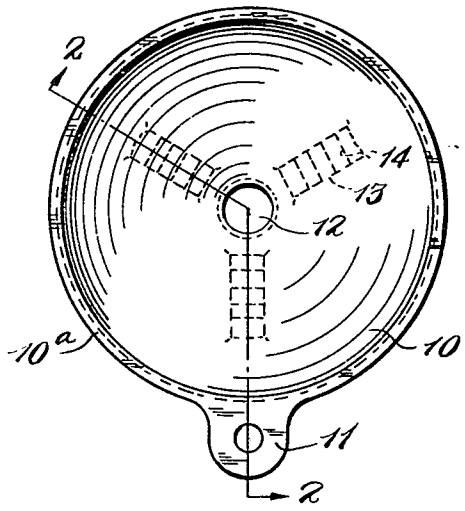

FIG. 1

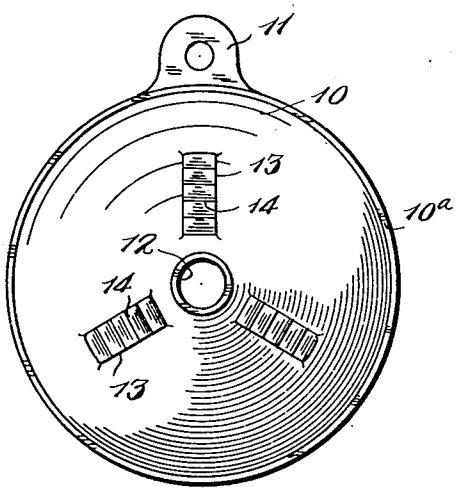

FIG. 3

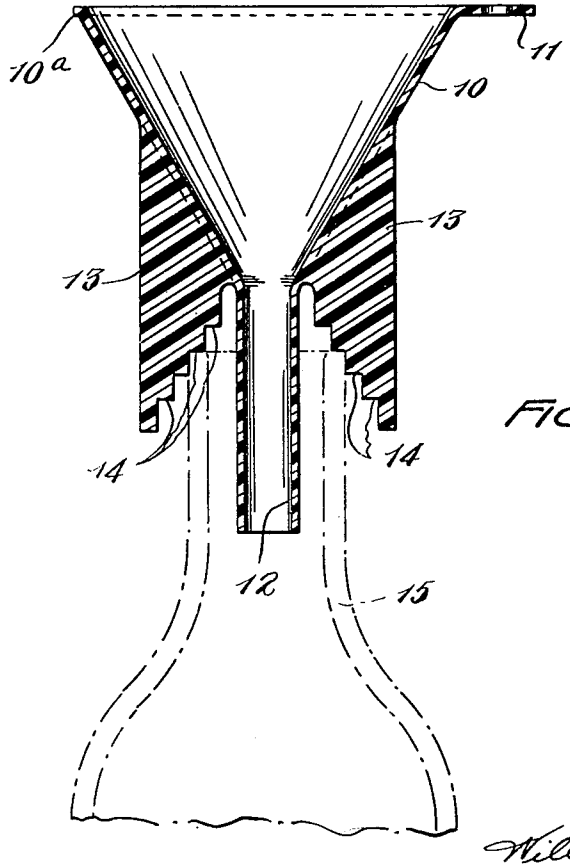

FIG. 2

INVENTOR.
AUGUST L. VOIGHT
BY Hudson, Boughton,
Williams, David & Hoffmann
ATTORNEYS

United States Patent Office 2,703,670 Patented Mar. 8, 1955

2,703,670

FUNNEL

August L. Voight, Berea, Ohio

Application March 24, 1952, Serial No. 278,211

1 Claim. (Cl. 226—33)

This invention relates to a funnel.

An object of the invention is to provide an improved and novel funnel which has increased utility, is sanitary, supports itself in operative position on different sizes of bottles and does not have to be manually held in position on the bottle by the user, is so constructed as to provide ample air venting from the bottle, may be economically produced from molded plastics if desired, and if so produced is shaped so as to furnish the requisite draft for removal from the mold, is of simple construction, pleasing appearance, and can be made and sold for a relatively low price.

Further and additional objects and advantages not hereinbefore specified will be apparent hereinafter during the detailed description of an embodiment of the invention which is to follow. Said embodiment of the invention is illustrated in the accompanying drawing wherein,

Fig. 1 is a top plan view of the funnel embodying the invention.

Fig. 2 is a longitudinal sectional view thereof taken substantially on line 2—2 of Fig. 1, looking in the direction of the arrows, a bottle to which the funnel is applied being indicated in dash lines; and

Fig. 3 is a bottom plan view of the funnel.

The funnel embodying the invention may be formed of metal, glass, plastic or any other suitable material and by suitable stamping, bending, molding or other operations. However, the funnel preferably will be formed of molded plastic and as a one piece or integral unit and thus will be so described herein by way of illustration and not by way of limitation.

The funnel comprises a body **10** of hollow conical configuration as is usual in funnel construction and is provided at its large end with a short annular outwardly extending flange **10***a*. A radially projecting handling tab **11** extends from the flange **10***a* and is provided with an opening, whereby the user of the funnel can grasp the tab in handling the funnel and hang the funnel on a hook or support when it is not being used.

The small end of the conical body **10** merges into and communicates with an elongated tubular or cylindrical spout or neck **12** which when the funnel is being used extends into the neck or opening of the bottle **15** or vessel or container. The longitudinal center lines of the body **10** and the neck or spout **12** are in alignment and the funnel has a symmetrical arrangement.

In the contemplation of the invention it is proposed to provide the funnel with a longitudinal series of circularly disposed steps spaced concentrically outwardly of the neck or spout **12** and with the diameters of the circularly disposed steps of the series decreasing from adjacent the free end of the neck or spout **12** toward the body **10**. The circularly disposed series of steps enables the funnel to be applied to different size bottles and said steps function to maintain the funnel in upright position on the neck of the bottle without requiring the user to manually hold the same in such position, thus greatly facilitating and simplifying the act of pouring liquids or other material into the bottle. The steps may be formed as continuous circular steps or they may be formed as circularly spaced step segments.

It is proposed because of manufacturing advantages and to provide optimum air venting of the bottle to have the series of circular steps composed of circularly spaced step segments. To this end circularly spaced bars

13 extend from the outer surface of the body **10** in parallel relationship to each other and to the neck or spout **12** and spaced radially outwardly from the exterior of the latter. The inner sides of the bars **13** adjacent to the neck or spout **12** are provided with identical longitudinal series of step segments **14**, with the corresponding step segments of the bars located in the same circle that is concentric to the neck or spout **12**. The circles on which the corresponding step segments **14** of the longitudinal series are located diminish in diameter from the free end of the neck or spout **12** toward the body **10**. The series of steps extend a sufficient distance longitudinally of the neck or spout **12** to provide numerous step segments so that the funnel can be applied to many different size bottles. It will be understood that when the funnel is applied to a bottle **15** with the neck or spout **12** of the funnel in the neck of the bottle, that the end of the neck of the bottle bears against a set of corresponding step segments **14** of the plural series and the funnel is firmly supported on the bottle and does not have to be held in position by the user during the pouring operation. It will also be noted that ample air venting of the bottle is provided.

Preferably the funnel will be molded from plastic and will be an integral unit. The bars **13** join the body **10** over an area extending from the neck **12** a substantial distance toward the large end of the body thus giving strength and sturdiness to the construction. The funnel has straight line surfaces and particularly the bars **13**, while the outer sides of the bars **13** are both straight and are located within a circle of less diameter than the maximum diameter of the body **10**. It will thus be seen that the configuration of the funnel provides necessary and ample draft for removing the same from the molding dies as an integral structure.

The funnel can be readily washed and would be formed of material that can withstand sterilization by boiling and hence is sanitary.

Although a preferred embodiment of the invention has been illustrated and described herein, it will be understood the invention is susceptible of various adaptations and modifications within the scope of the appended claim.

Having thus described my invention, I claim:

A molded integral funnel structure comprising a hollow conical body having a tubular neck communicating therewith and extending from the small end thereof with the longitudinal center lines of the body and neck in alignment, and means for supporting the funnel when applied to a container and including circularly spaced bars extending from the exterior of said body parallel to each other and to said neck and spaced radially outwardly of the circumference of the neck, said bars being integral with said body at their upper ends and for a substantial distance between the small and large ends of the body and with their outer surfaces being planular and all located within a diameter less than the maximum diameter of the body, whereby a draft is provided which enables the funnel to be molded as an integral structure and to be removed from the molding dies, said bars on the sides thereof adjacent to the circumference of said neck having identical longitudinally extending series of step segments with the corresponding longitudinally successive segments of the bars being located in a series of circles concentric to the neck and with the circles diminishing in diameter longitudinally of the series from the outer ends of the bars in a direction toward the small end of the body.

References Cited in the file of this patent

UNITED STATES PATENTS

135,391	Way	Jan. 28, 1873
1,868,389	Howard	July 19, 1932
2,545,350	Fuld	Mar. 13, 1951

FOREIGN PATENTS

241,194	Switzerland	July 1, 1946