Jan. 19, 1932. P. WISNER 1,842,228

LIQUID CONTAINER

Filed March 20, 1930

Fig. 1

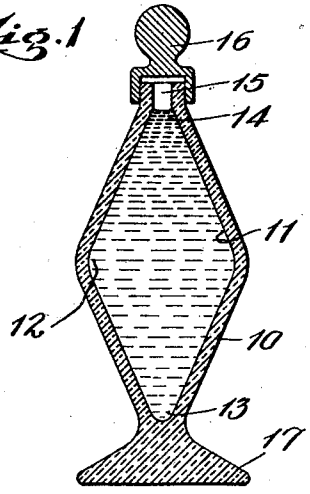


Fig. 2

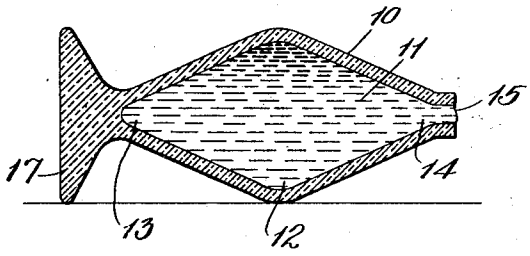


Fig. 3

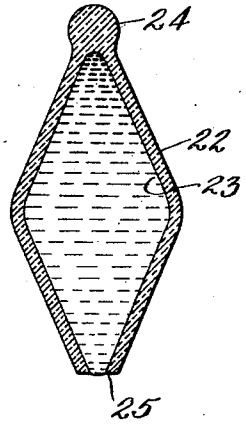


Fig. 4

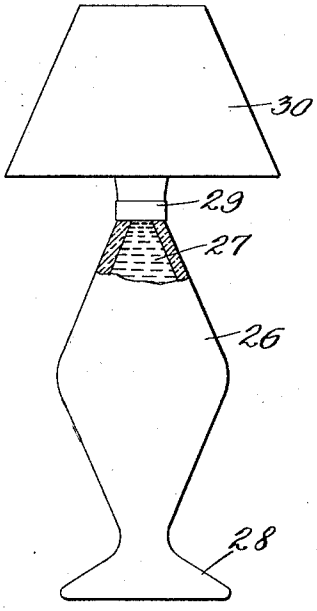
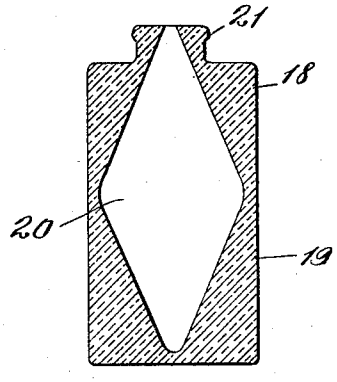


Fig. 5



INVENTOR.
Percy Wisner
BY Howard C. Thompson
ATTORNEY

Patented Jan. 19, 1932 1,842,228

UNITED STATES PATENT OFFICE

PERCY WISNER, OF NEW YORK, N. Y.

LIQUID CONTAINER

Application filed March 20, 1930. Serial No. 437,379.

This invention relates to liquid containers and particularly to devices of this class employing a liquid containing chamber of such form and contour as to prevent the accidental displacement of the liquid from the container and whereby numerous devices or articles of manufacture can be produced, utilizing the principles of this invention advantageously; and the object of the invention is to provide a liquid container or article of manufacture of various kinds and classes with a liquid containing chamber, the central portion of which represents the greatest diameter of the chamber and the end portions of which are contracted and conical in form, one end portion being closed or sealed and the other end portion terminating in a relatively small discharge passage whereby the liquid placed in said chamber will not be discharged therefrom in moving the container into inverted position or in other words with the open end thereof arranged downwardly or laterally, and whereby as long as the greater percentage of the liquid remains in the chamber the same will not be discharged therefrom accidentally; however, it is possible to discharge the contents of the container through sudden vertical reciprocation or agitation whereby the pressure of the air upon the exposed column of liquid will be sufficiently great to overcome and resist the force of the displaced liquid in the container; a further object being to utilize the principles of my invention in the manufacture of toys or puzzle devices, containers for perfumes, hair tonics and various other products of this kind, as well as in the manufacture of hollow liquid filled lamp stands and other novelty articles of this character; and with these and other objects in view, the invention consists in a device of the class and for the purpose specified which is simple in construction, efficient in use and which is constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:—

Fig. 1 is a sectional view of a container made according to my invention.

Fig. 2 is a view similar to Fig. 1 showing the container in angular position.

Fig. 3 is a sectional view of a puzzle or amusement device illustrating the principle of the invention.

Fig. 4 is a diagrammatic view of a lamp, the base of which is constructed in accordance with my invention; and,

Fig. 5 is a view similar to Fig. 1 showing a container, the peripheral contour of which distinguishes from that of the liquid chamber.

In Figs. 1 and 2 of the drawings, I have indicated one method of carrying my invention into effect and in said figures I have shown at 10, a bottle, vial or container which is primarily designed for use as a container for perfumes, hair tonics and various other similar toilet or medicinal liquid or semi-liquid products, it being also understood that the container may be used for mucilage, glue and like products.

In the construction shown, a chamber 11 of the container has its greatest width centrally at the point 12 and the walls of the container converge to the lower or closed end 13 and also converge to the upper discharge end 14, the latter end having a discharge aperture 15 normally closed by any suitable cap 16 which may or may not have a packing gasket. In the case of evaporating fluids, a gasket would be necessary. An enlarged stand or base 17 is at the lower end of the container to support the same upon a surface, and as shown the outer contour of the walls of the container proper conform with the contour of the chamber 11.

With a device of this class, a fluid placed in the chamber 11 will not be accidentally discharged from the container if the same is moved into the position shown in Fig. 2, nor into an inverted position with the discharge aperture 15 arranged downwardly this result being accomplished by virtue of the formation of the walls of the chamber converging to both open and closed ends

thereof, and the fact that the exposed opening 15 is not sufficient to allow the air pressure to counteract the relatively large and extended body of fluid. It is possible however to discharge the fluid from the container by quick agitation of the container so that the force of the air is sufficient to overcome the fluid pressure and each impulse or agitation will discharge a relatively small amount of the fluid, depending solely upon the amount of air allowed to enter the fluid chamber.

From the foregoing, it will be apparent that by virtue of the principles of the container above set forth, the same will adapt itself to commercial use as a container for many fluids, and especially where it is desirable to intermittently discharge relatively small portions of the contents or to retard the discharge, such for example, as in applying hair tonics to the head. Heretofore, it has been customary to devise special nozzles or caps to accomplish this result, but with applicant's construction, the form of the vessel or container itself will produce the desired result and at the same time, a safeguard is afforded against accidental discharge of the contents should the container be knocked down or otherwise displaced. This is also an important factor in the shipment of the containers as well as in packing the same in travelling cases of various kinds and classes.

In Fig. 5 of the drawings, I have shown a container 18 which differs from the container shown in Figs. 1 and 2 primarily in that the outer peripheral walls 19 of the container are of a contour and form contrasting to that of the chamber 20, the latter being similar to the chamber 11. In this construction, the discharge end 21 of the container resembles that of an ordinary bottle and it will be apparent that any desired peripheral contour may be provided and the exact formation of the chambers within the container may be varied, the only essential feature being that the inner portion of the chamber with respect to the discharge end be of materially greater dimensions or diameter than said discharge and that the walls leading to the discharge will have a gradual and not abrupt reduction in diameter.

In Fig. 3 of the drawings, I have shown at 22 a device made up in the form of a puzzle or amusement device having a chamber 23 similar in form to the chambers 11 and 20 and the closed end of the device terminates in a body 24 of any kind or class and the discharge end 25 is cut off abruptly and relatively flat. With this device, a liquid of any kind or class may be placed in the chamber 23 and the device used to amuse and entertain both young and old in the marvel of the impossibility of discharging the fluid contents when moving the same into inverted position as shown in the drawings. This device may also be used as a mucilage or glue applicator normally resting on its side on a table or other support, and other commercial uses of the device may be made.

In Fig. 4 of the drawings, I have shown the base portion 26 of a lamp constructed with a chamber 27 similar to the chamber 11. In fact, the entire base is substantially identical with the structure shown in Figs. 1 and 2 of the drawings, including the enlarged base support 28 similar to the support 17 and the electric fixture 29 is supported in connection with the upper end of the device and the shade 30 supported on said fixture if the device is to be used as an electric lamp; but, it may also be used as a container for the oil of oil lamps. In this use of the device, the outstanding feature resides in the fact that the displacement of the lamp will not permit the discharge of the contents of the fluid contained in the chamber 27, whether this be kerosene oil or a colored fluid of any kind or class used as an ornamentation for the lamp base or stand.

In the several figures of the drawings, I have indicated different devices composed of glass or similar material, by virtue of the cross section shown, but it will be understood that my invention is not limited to the use of any kind or class of material nor to any specific external contour or form, and it will also be apparent that the invention may be applied to articles of manufacture of various kinds and classes. While I have shown certain details of construction for carrying my invention into effect, it will be understood that I am not necessarily limited to these details and various changes in and modifications of the construction herein shown and described may be made within the scope of the appended claims without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A fluid container of the class described having a chamber provided with correspondingly formed, oppositely disposed, conical end portions, the contracted ends of which are directed downwardly and upwardly with respect to the container, one end opening outwardly through the container in a relatively small discharge, the size and shape of the discharge opening being such that a comparatively large volume of fluid will be retained against accidental displacement from the container when the container is inverted.

2. A fluid container of the class described having a chamber provided with correspondingly formed, oppositely disposed conical end portions, the contracted ends of which are directed downwardly and upwardly with respect to the container, one end opening outwardly through the container in a relatively

small discharge, the width of the chamber of said container centrally thereof being substantially equal to one half the total length of both conical portions of the chamber whereby a comparatively large volume of fluid will be retained against accidental displacement from the container when the container is in inverted position by virtue of the contour of the container walls and the size and shape of the discharge opening, and the lower end of the container having an enlarged base forming a support therefor and the width of said base being substantially equal to the greatest outside diameter of the central portion of said container.

In testimony that I claim the foregoing as my invention I have signed my name this 19th day of March, 1930.

PERCY WISNER.