Dec. 13, 1960 A. P. JACKSON ET AL 2,964,047

CLEANSING CONTAINER AND CLOSURE THEREFOR

Filed April 2, 1957

FIG. 1

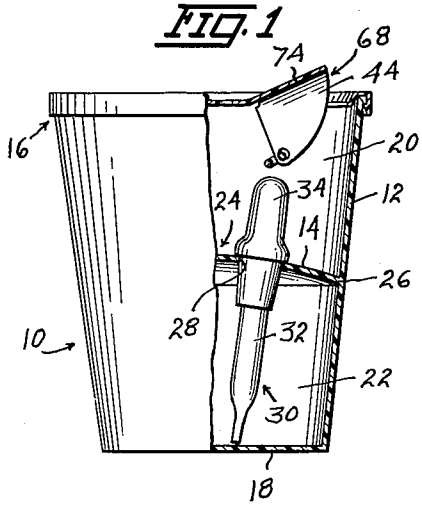


FIG. 2

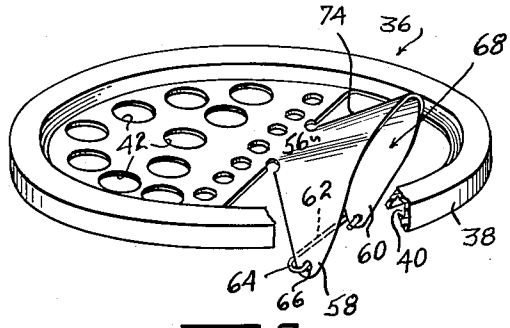


FIG. 3

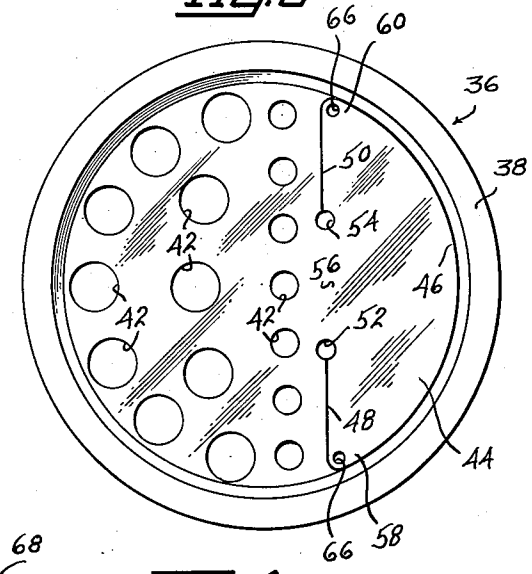


FIG. 5

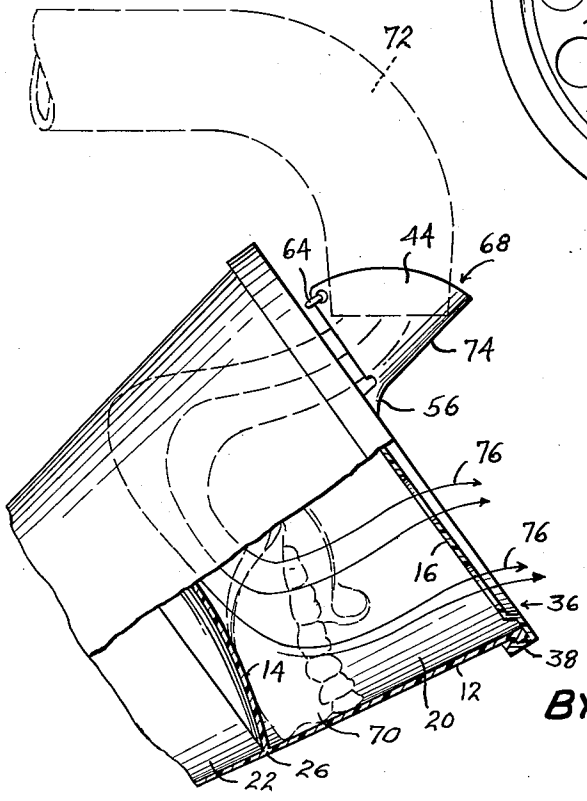
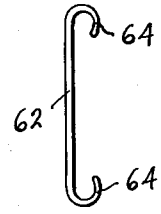


FIG. 4



INVENTORS.
ALBERT P. JACKSON
CARL C. GRUND

BY Morton L. Adler

ATTORNEY.

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CLEANSING CONTAINER AND CLOSURE THEREFOR

Albert P. Jackson and Carl C. Grund, Des Moines, Iowa, assignors to A. C. Alvin Company, Des Moines, Iowa, a co-partnership

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7 Claims. (Cl. 134—183)

Our invention relates to improvements in a container through which a cleansing agent is flushed over articles therein to be cleansed.

We shall describe our invention, as will later appear, as being used for the cleansing of dentures but it will be understood that such use is illustrative only and is not intended as limiting the invention thereto since it can be used for many other articles such as machine parts and similar items from which dirt, grease and other foreign substances must be removed.

One of the important objects contemplated by this invention is the provision of a novel closure for a container with said closing being designed to admit a flushing agent, to provide means for the exit of the same and to adequately protect the articles being cleansed from displacement from the container.

Another object herein is to provide an improved container including a cleansing compartment for articles to be cleansed, a storage compartment for a cleansing agent and means for transferring the cleansing agent to the cleansing compartment.

Further objects of this invention are to provide a container and closure therefor of the above class that is extremely economical to manufacture, is durable in construction, refined in appearance and efficient for its intended use.

Other objects and advantages of this invention reside in the details of construction and correlation of the various parts and will be apparent as the description proceeds.

This invention consists of novel parts and combination of parts to be hereinafter described whereby the objects set forth are attained, as pointed out in the claims, and illustrated in the accompanying drawings, in which:

Fig. 1 is an elevational view of our container and closure therefor, partly in section to more clearly illustrate its construction,

Fig. 2 is an enlarged perspective view of a preferred embodiment of our closure member, with a portion cut away to more fully illustrate its construction,

Fig. 3 is a top view of the closure with the receiving funnel not completely formed,

Fig. 4 is an enlarged elevational view of the pin which is used in shaping the receiving funnel, and,

Fig. 5 is an enlarged elevational fragmentary view showing the upper compartment of the container containing articles to be cleansed and showing the container in relationship to a water faucet for receiving water in a flushing action.

Referring to the drawings our container and closure in assembled form ready for use is indicated generally at 10 in Fig. 1. The container 12 is an open top type and includes a partition 14 intermediate the top 16 and bottom 18 thereof to form the respective upper and lower compartments 20 and 22. Partition 14 as seen in Figs. 1 and 5 is dome shaped so that its central portion 24 (Fig. 1) extends into the upper compartment 20 at a higher level than the periphery thereof 26 which

is preferably integrally formed with or otherwise secured to the inner side walls of the container 12. This partition is designed to provide a seal between the compartments 20 and 22 except for communication between the same through an opening 28 located intermediate the periphery 26 and the high dome point 24. A dropper member 30 of common form including a glass or plastic tube 32 topped by a compressible bulb 34 is positioned through opening 28 so that part 32 is in the lower compartment 22 while part 34 is partially in the upper compartment and is partially frictionally seated in opening 28 to serve as a closure therefor.

As thus far described, compartment 22 is designed to hold a supply of any suitable fluid cleansing agent and compartment 20 is designed to hold an article or articles to be cleansed. A suitable quantity of such cleansing agent may be transferred from compartment 22 to 20 by means of the dropper 30 in a well known manner and when this is being done, it will be apparent that communication between the two compartments is present through opening 28. In this respect, the shape of partition 14 and location of opening 28 as described are particularly effective in preventing the cleansing agent deposited in compartment 20 from running back into the lower compartment before stopper 30 is replaced.

Contributing materially to the novelty and usefulness of this invention is our new closure shown generally by the numeral 36 in Figs. 2 and 3. This closure is a relatively flat body member designed to fit on the rim of a container and since most containers for our purposes are cylindrical, it is preferably formed in a flat disc shape having a peripheral rim 38 which in cross section is formed as an inverted channel 40 (Fig. 2) so as to snap snugly onto the top edge of the container 12 as shown in Fig. 1. Closure 36 is preferably made of a suitable flexible and resilient material such as plastic or the like which is commercially available and its surface area within the rim 38 is provided with a plurality of spaced holes or openings 42 which are always open and a bendable flap member 44 which serves as a funnel as will later appear. Flap 44 is semicircular in shape being cut from closure 36 along the lines designated 46, 48 and 50 in Fig. 3. As shown, lines 48 and 50 terminate in the respective openings 52 and 54 leaving the area 56 between these openings as a flexible attachment of flap 44 to the body of closure 36. Thus formed, flap 44 is flat but is formed into an arcuate funnel by turning down the respective ends 58 and 60 until they are in parallel spaced relationship as shown in Fig. 2 and such ends are held in this position by a plastic bar or rod 62 having hooks 64 on each end for engaging respectively the small openings 66 in flap ends 58 and 60. Thus formed, flap 44 becomes a funnel with a mouth 68 forming an opening through closure 36. Mouth 68 is disposed toward the rim 38 and normally is partially above and partially below the level of rim 38 as seen in Figs. 1 and 2 which is its inoperable position. Funnel 44, however, is capable of a vertical hinge like movement, because of the flexibility of portion 56, to its operable position shown in Fig. 5 and this has a particular purpose as will later appear.

To use our invention as described, compartment 20 is provided with a suitable amount of a cleansing agent from compartment 22, and the article or articles to be cleansed are placed in compartment 20. We show such articles as dentures 70 (Fig. 5) for purpose of illustration but it will be understood that this invention has application as disclosed to any other type article or item susceptible of being cleansed as herein described. Closure 36 is then applied to the container 12 and the assembled unit 10 is ready for presentation to a water faucet 72 so that water may be flushed through th[illegible]

and over the articles 70. This is done by manually holding the container so that the mouth 68 of funnel 44 can be placed about the outlet end of the faucet (Fig. 5) and then tilting the container so that the closure portion containing the holes 42 slopes downwardly away from the faucet as shown. In this position funnel 44 will have been swung upwardly on its hinged connecting portion 56 and thus the back side 74 of funnel 44 (Fig. 5) becomes in effect a baffle element disposed angularly across the outlet end of faucet 72. When faucet 72 is opened, water follows a path outlined generally by the arrows 76. A good portion of the water flow will be deflected by the baffle-like side 74 of the funnel against the side of container 12 in compartment 20, then through such compartment in a turbulent action against the articles and cleansing agent, and then out of openings 42. The size, number and spacing of holes 42 is arbitrary but should provide sufficient outlet passages to permit a free flow of water therethrough under ordinary water main pressure. When funnel 44 is removed from contact with the faucet 72, the resiliency of the material of which it is made will automatically cause it to return to its inoperable position as shown in Fig. 2.

It will be appreciated from the above description that our novel closure member 36 includes not only a water inlet port and a plurality of outlets therefor but also serves as means to hold articles 70 within the container during the turbulence of the water passing through. In this respect while we have illustrated and described the container 12 which we preferably use with this closure, it is to be understood that our closure can be used as described on any suitable open top container since means for entrance and exit of water is provided for entirely within the construction of the closure itself.

It will be understood that the phraseology employed herein is for the purpose of description and not for limitation and that modifications and changes in the construction and arrangement of this invention can be made within the scope of what is claimed, without departing from the spirit and purpose thereof. It is thus intended to cover by the claims, any modified forms of structure or mechanical equivalents which may be reasonably included within their scope.

We claim:

1. Apparatus for use in cleansing articles, comprising, an open top container, a removable closure therefor, said closure having an inlet and an outlet adapted to be continuously open, an arcuate funnel integrally formed with and of the same material as said closure and communicating with said inlet, and said funnel adapted for engagement with a water faucet so that the closed end of said funnel is angularly disposed across the mouth of said faucet to serve as a baffle whereby water from the faucet is deflected against one side of said container into a turbulent flow and passes out of said outlet.

2. Apparatus for use in cleansing articles, comprising, an open top container, a removable closure therefor, said closure being disc shaped of flexible material and including a peripheral rim designed for attachment to said container, a portion of said closure within and adjacent said rim slit to provide a flap bendable into an arcuate funnel so that the open side is disposed toward said rim, means to hold said flap in a funnel shape, said funnel serving as an inlet opening, said closure provided with an outlet opening within the confines of said rim and spaced from said funnel, said inlet and outlet adapted to be continuously open, and said funnel adapted for engagement with a water faucet so that the closed side of said funnel is angularly disposed across the mouth of said faucet to serve as a baffle whereby water from the faucet is deflected against the rear side of said container into a turbulent flow and passes through said container and out of said outlet.

3. Apparatus for use in cleansing articles, comprising,

an open top container, a removable closure therefor, said closure formed of flexible material, one end portion of said closure slit to provide a flexible flap bendable into an arcuate funnel so that the open side is disposed toward the adjacent end of said closure, means to hold said flap in a funnel shape, said funnel capable of a hinge-like movement and serving as an inlet opening, said closure provided with an outlet opening spaced from said funnel, said inlet and outlet adapted to be continuously open, and said funnel adapted for engagement with a water faucet so that the closed side of said funnel is angularly disposed across the mouth of said faucet to serve as a baffle whereby water from the faucet is deflected against one side of said container into a turbulent flow as it passes through said container and out of said outlet.

4. Apparatus for use in cleansing articles, comprising an open top container, a removable closure therefor, said closure being of flexible material, a portion of said closure defining a flap bendable into an arcuate funnel having its open side adjacent and disposed toward an edge of said closure, means to hold said flap in a funnel shape, said funnel integrally attached to said closure whereby said point of attachment affords a hinged movement for said funnel, said funnel serving as an inlet into said container through said closure, said closure provided with an outlet spaced from the closed side of said funnel, said inlet and outlet adapted to be continuously open, and said funnel adapted for engagement with a water faucet so that the closed side of said funnel is angularly disposed across the mouth of said faucet to serve as a baffle whereby water from the faucet is deflected against the adjacent side of said container into a turbulent flow and passes in a continuous stream through said container and out of said outlet.

5. A closure for a container to be used for cleansing articles placed therein, said closure comprising a flat body member of flexible material adapted for removable attachment to the open top of a container, said body member provided with a plurality of spaced fluid outlet holes adapted to be continuously open, one end portion of said body member defining a flexible flap bendable into a fluid inlet arcuate funnel forming an opening in said body member, the open side of said funnel disposed toward the adjacent end of said closure, and means to hold said flap in a funnel shape.

6. A closure for a container to be used for cleansing articles placed therein, said closure comprising a body member of flexible material adapted for removable attachment to the open top of a container, said body member provided with a plurality of spaced fluid outlet holes adapted to be continuously open, and a portion of said body member defining a flap formable into an arcuate funnel for serving both as a fluid inlet opening in said body member and as a baffle means to deflect fluid passing therethrough against one side of the interior of said container.

7. A closure for a container to be used for cleansing articles placed therein, said closure comprising a substantially flat body member of flexible resilient material adapted for removable attachment to the open top of a container, said body member provided with a plurality of spaced holes adapted to be continuously open, a portion of said body member defining a flap formable into an arcuate elongated funnel defining an opening in said body member, said funnel normally in inoperable position wherein the longitudinal axis of said funnel is parallel to and substantially on the same plane as said body member, said funnel movable to operable position in a hinge-like movement at its point of integral resilient attachment to said body member by manually engaging it against an object such as a water faucet or like wherein the longitudinal axis of said funnel is angularly disposed relative to said body member, and said funnel adapted

for automatically returning to inoperable position when disengaged from such object by the resiliency of the material at said hinge point.

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