United States Patent [19]

Frazer

[11] **3,708,092**

[45] **Jan. 2, 1973**

[54] **REMOVABLE FUNNEL FOR CONTAINERS**

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[73] Assignee: **Union Carbide Corporation,** New York, N.Y.

[22] Filed: **Jan. 20, 1971**

[21] Appl. No.: **107,892**

[52] **U.S. Cl.** **222/567**

[51] **Int. Cl.** **B65d 5/74**

[58] **Field of Search** 222/475, 530, 533, 536, 531, 222/465, 467, 526, 567, 461, 460

[56] **References Cited**

UNITED STATES PATENTS

133,683	12/1972	Tuttle	222/536 X
2,580,811	1/1952	Martinsen	222/460
2,735,594	2/1956	Carnes	222/567
2,786,606	3/1957	Dushek et al.	222/530 X

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[57] **ABSTRACT**

The combination of a container for a liquid or a particulate solid, having a handle and a pouring spout, and a funnel which is adapted to be removably secured to the spout when pouring from the container and to be fitted over and become part of the handle when not in use.

2 Claims, 5 Drawing Figures

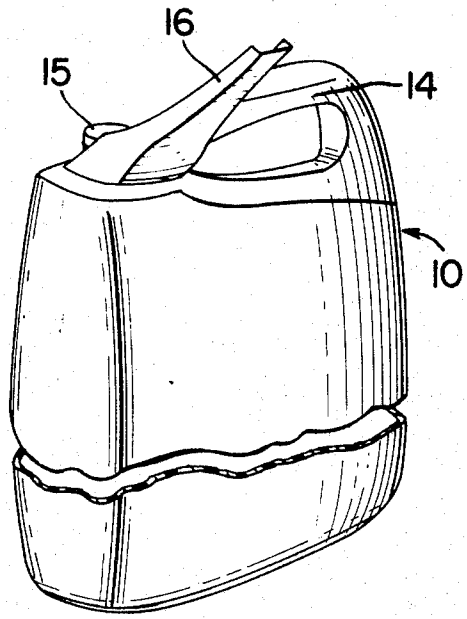


FIG. 1.

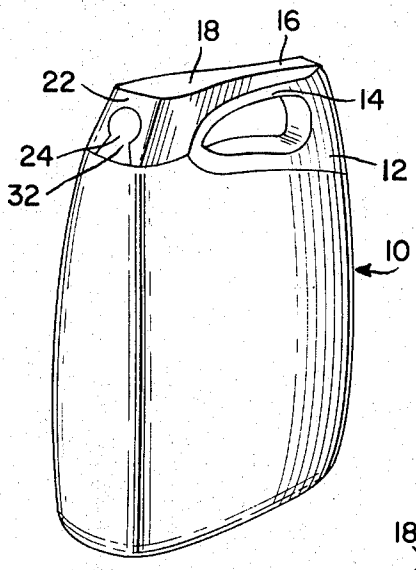
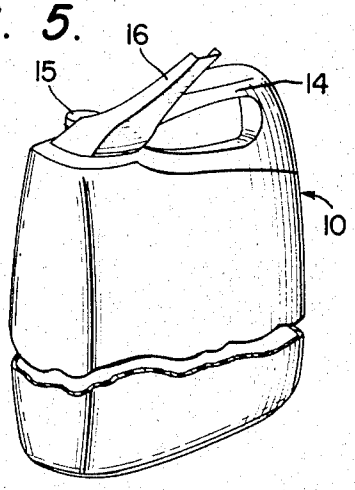


FIG. 5.



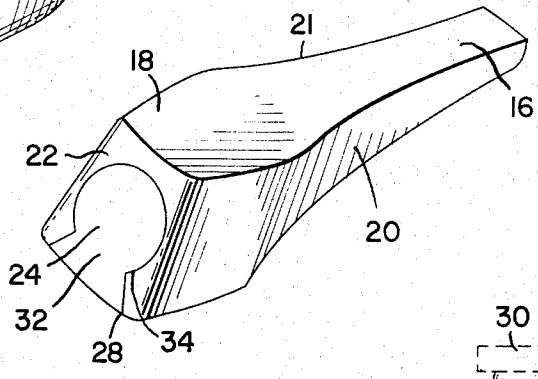


FIG. 2.

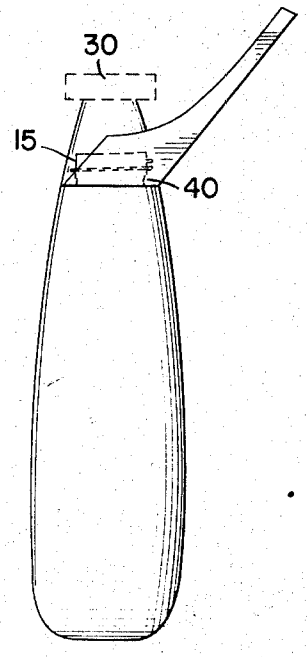


FIG. 3.

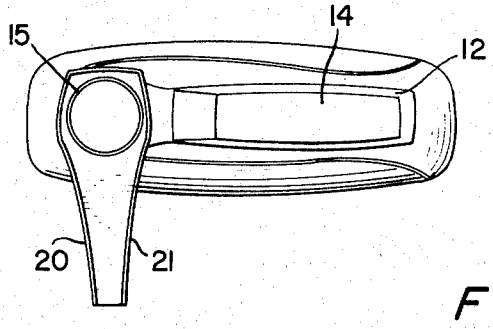


FIG. 4.

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REMOVABLE FUNNEL FOR CONTAINERS

This invention relates to an improved pouring funnel for use in pouring a material from a container having a pouring spout at one end thereof. More particularly, the invention relates to a pouring funnel adapted to be readily mounted over and become part of the handle of the container when not in use.

With the advent of blow molding and injection molding processes for manufacturing plastic articles, the container industry now has the flexibility for producing containers in many varied shapes and sizes to meet the demands of packagers and consumers. The problem with these containers, however, is than an appreciable amount of the contained material, whether the material be liquid or a particulate solid, is lost due to spillage during pouring. This is especially true where the material is being poured from the container into another receptacle having a relatively small opening. The spillage problem is of particular significance when the container is full or nearly full of the contained material. For example, when pouring anti-freeze from a container into an automotive engine radiator, the radiator opening is of such relatively small diameter that loss of the anti-freeze from spillage may result.

Many types of funnels have been devised to solve this spillage problem. Most of these funnels are used independently of any particular container, i.e. they are fitted into the mouth of the receptacle receiving the poured material to provide a larger opening within which to pour. These funnels are normally carried and stored independently of the container. To prevent cross-mixing and contamination of the various materials which may be poured through the funnel, the funnel must be cleaned after each use. This cleaning is time consuming and if not done properly may still result in contamination of materials. A separate funnel may be utilized for each material but this results in a storage problem because of the number of funnels necessary.

The contamination problem is of special significance when dealing with automotive products such as oil, gasoline, anti-freeze, etc. Each product serves a different purpose and contamination or cross-mixing can cause serious damage to automotive parts.

Funnels have also been proposed which are permanently affixed to the containers from which a liquid or solid material is to be poured. However, with permanently affixed funnels means must be made available to effectively close off the funnel outlet when the container is not in use. This is especially necessary where the contained material is highly volatile or flammable.

Other types of funnels have been designed to be attached to a container by utilizing a mechanical device such as a spring or an elastic member. Another type of funnel which has been proposed is one that is affixed to the container by fitting the funnel into the container, such as by puncturing a hole in the container with the inlet end of the funnel. However, once the container has been punctured, it is not reusable. Also, the funnels must still be transported and stored independently of the container.

It is, therefore, an important object of this invention to provide an improved funnel which is constructed to become part of and fit over the handle of a container for carrying ease when not in use.

Another object of this invention is to provide a container and a funnel which can be attached to the pouring spout of the container without any additional mechanical elements.

Still another object of this invention is to provide a container with a funnel which when attached in the pouring position will allow unobstructed access to and from the container spout while the funnel is in place.

A further object of this invention is to provide a funnel for a container which is less expensive to manufacture than those presently available.

The foregoing and other objects are achieved by the combination of a container having a handle and a pouring spout at one end thereof and a funnel for pouring a liquid or a particulate solid, the funnel being adapted to be removably secured to the pouring spout when pouring from the container and to be fitted over and become part of the handle when not in use.

A fuller understanding of this invention will be facilitated by reference to the accompanying drawing, wherein:

FIG. **1** is a perspective view of one form of the container and funnel combination in accordance with the invention and showing the funnel positioned over the top of and becoming part of the container handle;

FIG. **2** is a perspective view of the funnel alone;

FIG. **3** is an elevational view of the container with the funnel removably attached to the container spout and showing in broken lines a conventional screw cap for the spout;

FIG. **4** is a top plan view of the container and funnel attached as shown in FIG. **3**; and

FIG. **5** is a perspective view showing container and funnel in "pouring" position as shown in FIG. **3** and FIG. **4**.

In particular, and with reference to the accompanying drawing, a container denoted generally as **10** has a top portion **12** formed with a handle **14** and an upwardly projecting pouring spout **15**. A generally U-shaped funnel **16** is provided for pouring a liquid or particulate solid from the container.

As shown more particularly in FIGS. **1** and **2**, the funnel has a base portion **18** with upstanding side walls **20**, **21** which are interconnected by a rear wall **22**. The rear wall **22** has a removable cut-out **24**, preferably of semi-circular shape, which is of such size as to fit around a portion of and engage the container spout **15**. The U-shaped funnel **16** is removably attached to the upwardly projecting spout **15** by a suitable means such as a semi-circular configuration or snaps **28**. The funnel may be removably attached to the spout **15** by a force fit of the removable cut-out **24** around the spout **15**, a tongue and groove locking arrangement, or with a recessed groove **40** around the base of the spout **15**. It can readily be seen that no additional mechanical means, such as a spring, is necessary to fasten the funnel **16** to the container **10**. It is to be noted, and with particular reference to FIG. **3**, that the spout cap **30** may be taken on or off the spout **15** without the necessity of removing the funnel **16** therefrom.

The funnel **16**, when not removably attached to the container spout **15**, may be mounted on and thereby become part of the container handle **12** for carrying ease as illustrated in FIG. **1**. The funnel **16** and container **10** form a package which can be stored or trans-

ported easily as a single unit. Additionally, packaged liquid or particulate solid will not be subject to any cross-contamination since each material will have its own individual funnel **16** which can and will be transported with the contained material.

Preferably, the rear wall **22** of the funnel **16** is provided with a "punch-out" section **32** when initially sold and which must be removed by the consumer to form the cut-out **24**. Perforations **34** are formed about the periphery of the section **32** so that a minimum of pressure is required to remove the section **32**.

Preferably, the container **10**, the funnel **16** and the spout cap **30** are each integrally formed by either blow molding or injection molding of a suitable plastic material such as polyethylene.

What is claimed is:

1. A package for pourable material comprising:

a. a container provided at one end thereof with a handle and a spout having a removable cover; and

b. removably overlying said handle and said spout and in general conformity with the configuration of said handle a funnel of generally U-shaped cross-section having:

1. a base portion; portion;
2. sidewalls along two sides of said base portions; and
3. a rear wall interconnecting said side walls and said base portion, said rear wall having a removable portion of configuration at least in part generally corresponding to that of said spout so that when said portion is removed said rear wall is adapted to fit and be retained about said spout, said funnel providing a conduit for said pourable material when said funnel is removed from said handle, its rear wall is fitted to said spout and said cover is removed from said spout.

2. A package as defined by claim **1** having a recessed groove about the base of said spout.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,708,092 **Issue Date** January 2, 1973

Inventor(s) John S. Frazer

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

In column 4, line 4, claim 1, "portion" second occurrence should be deleted, and in column 4, line 5 "portions" should read -- portion --; in the same column, lines 4, 5, and 6 the numerals "1", "2" and "3" in each such line should be in parentheses.

Signed and sealed this 22nd day of May 1973.

(SEAL)
Attest:

EDWARD M.FLETCHER,JR.
Attesting Officer

ROBERT GOTTSCHALK
Commissioner of Patents

Pat 212:4.72