Dec. 28, 1954 J. V. MALONEY 2,698,082

INFUSION PACKAGE

Filed Feb. 27, 1952

Fig. 1.

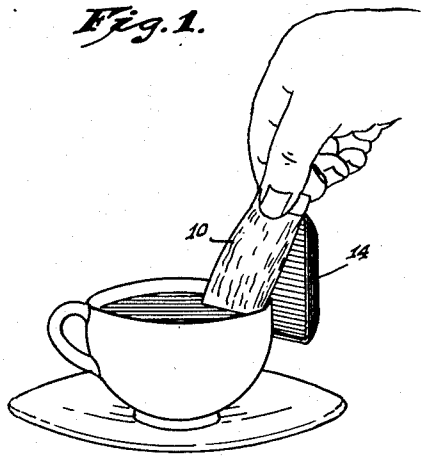



Fig. 2.

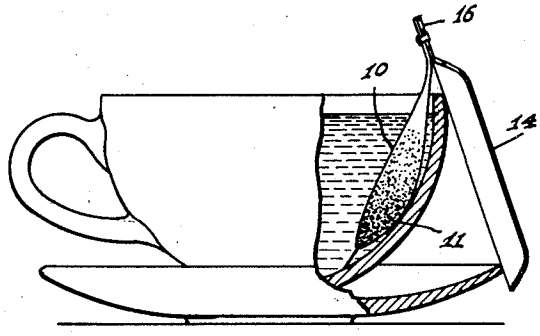



Fig. 3.

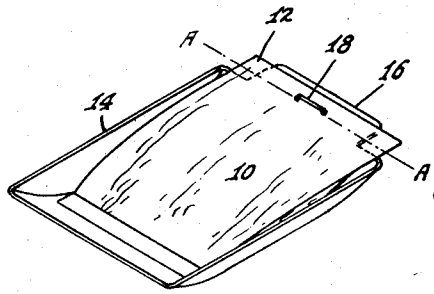



Fig. 4.

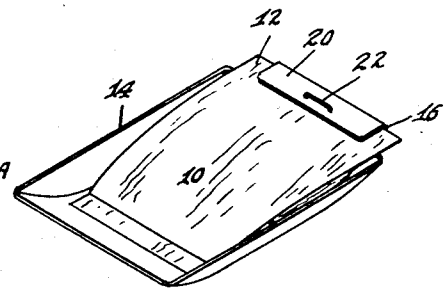
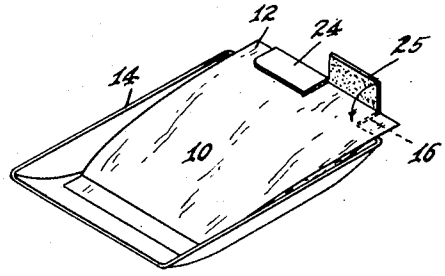



Fig. 5.




INVENTOR.
JOSEPH V. MALONEY,
BY
Schley, Rash & Jenkins
ATTORNEYS.

United States Patent Office 2,698,082
Patented Dec. 28, 1954



2,698,082

# INFUSION PACKAGE

Joseph V. Maloney, Franklin, Ind.

Application February 27, 1952, Serial No. 273,577

6 Claims. (Cl. 206—0.5)

This invention relates to an infusion container adapted for use as a single-service package, embodying an envelope or bag containing a quantity of tea, coffee, or other infusion material, and a dished receptacle pivotally connected thereto.

In the well known and widely used tea bag, the tea is contained in a bag or envelope which is connected by a string to a tag or label. The tag and the string are used to manipulate the bag, to immerse it in a cup or pot of hot water or other infusion liquid, and especially to withdraw it therefrom when the brew has reached the desired strength. Such bags, with their attached strings, present an awkward problem in packaging, for the strings tend to become entangled and the user has difficulty separating one bag from a group in the package. In use, especially at the dining table, when the bag is withdrawn from the liquid in a cup, the user is presented with a troublesome problem of what to do with the wet and dripping bag. Usually, the bag is put in the saucer, with the result that liquid drains from it to the bottom of the saucer and wets the bottom of the cup, and when the user lifts the cup to drink from it, the cup drips.

It is an object of my invention to provide an infusion container or single-service package which will include a bag that may be used in the same general way as prior tea bags, in combination with a receptacle directly connected to it to form a unitary package. It is an object of my invention to provide a unitary package which will conveniently stack with others in a group package and will be easily separated and removed therefrom. It is an object of my invention to provide a combined infusion bag and dished receptacle so related that the unit may be manipulated with one hand to immerse the bag in a cup or pot of liquid and to withdraw the bag therefrom, and so related that a simple pivotal movement of the receptacle as the unit is withdrawn will cause the wet bag to enter the receptacle and be so received therein that the unit may be set on the table with the bag and its drippings wholly contained in the receptacle.

In accordance with my invention, I provide a dished receptacle, preferably (but not necessarily) of rectangular shape and preferably with a handle tab along one edge, with the receptacle of a size to receive a bag containing the infusion material; I place a bag therein, preferably with a flat marginal portion of the bag lying against the tab of the receptacle; and I join the bag to the receptacle at one edge, preferably at the tab, by a direct pivotal connection. The receptacle contains the dry bag during packaging and distribution, and may be nested with others in a market-size package; and the direct pivotal connection provides that after use the receptacle can be moved with one hand through a simple pivotal movement as by its handle tab, to cause the wet bag to enter the receptacle in a position where both it and any drainings from it will be contained in the receptacle. The receptacle is desirably made of a liquid-impervious material, and may have an absorbent inner surface or lining. The receptacle serves as a convenient label, to carry printed instructions and other label information.

The accompanying drawing illustrates my invention. In such drawing:

Fig. 1 is a perspective view showing the operation of immersing in a cup of liquid the infusion bag of a package embodying my invention;

Fig. 2 is a side elevation with parts in section, showing the bag in position in a cup of liquid;



Fig. 3 is an isometric view of an infusion package embodying my invention, in which the bag is attached to the receptacle by a staple;

Fig. 4 is an isometric view showing a package embodying my invention, in which the connected end of the bag is received beneath a bentover tab on the receptacle, and in which the parts are held together by a staple; and

Fig. 5 is a view similar to Fig. 4 in which the parts are held together by a water-insoluble adhesive.

The infusion bag shown in the drawing is in the form of a rectangular envelope **10** desirably of somewhat greater length than width and containing a single-service quantity **11** of tea, coffee, or other infusion material. The attached end of the bag **10** desirably has a flat marginal portion **12** somewhat wider than that at other edges of the bag, but otherwise the bag closely resembles an envelope type bag of a type now on the market. Because of this resemblance, the bag I use may be made on the same machines as those now in use, indeed the bag itself may be identical with those of this type now on the market. The bag **10** is attached by its marginal end **12** to a dished receptacle **14**, with the bag **10** resting in the receptacle **14** as shown in Figs. 3 to 5. The receptacle **14** is desirably of sufficient volume to contain the filled portion of the bag wholly below the plane of its top edges, and is of sufficient rigidity to be seuf-sustaining and to permit it to be handled in the manner noted below.

Desirably, the receptacle has an outwardly extending tab **16** at one end, to which the bag **10** may be attached and which serves as a handle for the container. The receptacle may be made of any of a number of materials, and by various methods. Conveniently, it may be molded of paper or plastic stock. The stock may be water resistant, or may be given a water resistant coating. It may be made of water-absorbent stock, and coated only on the outside so that after use it will absorb liquid which drains from the wet bag. Both the bag and the receptacle should be made of taste free material, to avoid contaminating the taste of the infusion material.

The receptacle **14** may be of any desired shape. It is desirably of the rectangular tray-like shape as shown, especially when it is combined with a recentagular envelope-type bag. Its bottom is flat, or otherwise formed to provide a stable base on which it may rest in upright, liquid-retaining position. It is desirably somewhat longer and wider than the bag so that the bag **10** will not project beyond its sides or ends.

In Fig. 3, the bag **10** is attached to the single-layer tab **16** by a single staple **18**, positioned parallel to the attached edge of the bag **12** and parallel to the edge of the tab **16**. In Fig. 4, the receptacle **14** is provided with a somewhat longer tab **16** the outer end **20** of which is bent over the edge **12** of the bag **10** and held by a single staple **22**.

Instead of a staple to connect the tea bag **10** and receptacle **14**, a water-insoluble adhesive may be used, in either of the arrangements of Figs. 3 and 4, whether or not a tab portion is bent over the marginal edge **12** of the bag. The use of adhesive is illustrated in Fig. 5. As in Fig. 4, the receptacle **14** carries an elongated tab **16** whose outer end **24** is bent over the edge **12** of the bag **10**. Here, however, the inner surfaces of the tab and its overlying portion **24** are coated with adhesive **25** which is caused to adhere to the opposite faces of the marginal edge **12** of the bag **10**.

Various other attaching means may be used. For example, the porous material from which some tea bags now on the market are made is coated or impregnated with a heat-sensitive adhesive, which under the application of heat and pressure closes the edges of the tea bag. With an infusion bag of this material, the marginal end **12** of the bag may be attached to a tab or edge of the receptacle **14** by a similar application of heat and pressure.

The attachment between the bag **10** and the receptacle **14** provides a pivotal connection therebetween, and desirably a hinge-type connection in which the parts are constrained to relative movement about a single transverse pivotal axis, indicated by a dashed line A—A in Fig. 3. In that Fig. 3, the constraint to relative

movement in a single plane is provided by the use of a two-pronged staple **18** arranged parallel to the edge of the marginal portion **12** of the bag **10**. In Fig. 4, it is provided by the inward edge of the overlying portion **20** of the tab, and in Fig. 5 by the similar edge of the overlying portion **24** of the tab. Such constraint to pivotal movement of the bag with respect to the receptacle is preferred but is not deemed essential to the desired manipulation, for the same result will be effectively obtained when the overlying margin **12** and tab are grasped between the thumb and finger of the user as shown in Fig. 1.

The bag **10** normally lies within the dished receptacle **14**, preferably with the bulky filled portion of the bag below the top edges of the receptacle **14**, which gives the unit package a regular shape. The outer walls of the receptacle desirably slope outward to permit partial nesting between the several packages in a stack, which tends to prevent displacement of the package from the stack. A plurality of unit packages may be stacked in a market-size package in a regular and orderly arrangement, and the partial nesting between them will maintain them in good order in the package. There will be no strings to get tangled, and the individual unit package will be readily separable and removable from the package.

Figs. 1 and 2 illustrate the use of my new package. For immersing the bag in a cup of liquid, the package is grasped at the attachment edge, as by its tab **16**, between the thumb and finger of the user, and is held in a depending position. The relatively rigid receptacle **14** is swung downward and rearward to an inverted position, which leaves the bag hanging free. With the bag in this position relative to the receptacle, it can readily be lowered into the cup with the receptacle passing downward outside the cup. The package is then left hooked over the edge of the cup as is shown in Fig. 2, with the bag **10** inside the cup and the receptacle **14** outside the cup, and with the tab **16** in an upstanding position above the cup. When the infusion has reached the desired strength, the package is again grasped by the tab and lifted clear of the cup, and the receptacle is swung forward and upward to carry the receptacle against the depending bag **10** and to cause the bag **10** to enter the receptacle **14**. Further pivotal movement brings the receptacle **14** with the wet bag therein to a horizontal or upright position. In that position it may be set on the table or on any horizontal surface, and the wet bag and any drainings therefrom will be wholly contained and



confined within the receptacle **14**. The whole operation is a simple one-handed operation, and there is no need for the user to grasp the wet bag.

I claim as my invention:

1. An infusion package, comprising an infusion container having a flexible marginal portion, a dished receptacle of a size to receive the container, a handle-tab at one edge of the receptacle, the container being received in the receptacle with the flexible marginal portion thereof contiguous to the tabbed edge of the receptacle, and means affixing the marginal portion and the tabbed edge together.

2. An infusion package, comprising an infusion container having a marginal portion, a dished receptacle of a size to receive the container, a projecting handle-tab at one edge of the receptacle, the container being received in the receptacle with a flexible marginal portion thereof overlying said tab, and means affixing the marginal portion of the container to the tab.

3. An infusion package as defined in claim 2 in which the inner surface of the infusion container is absorbent.

4. An infusion package as defined in claim 2 in which said receptacle and container are of generally rectangular shape and said marginal portion and tab are at a short side of the rectangular shape.

5. An infusion package, comprising an infusion container having a straight attachment edge, a dished receptacle of a size to receive the container and having a straight edge, said container being received in the receptacle with its straight attachment edge in juxtaposition with the straight edge of the receptacle, and means hinging the container and receptacle together on an axis extending along said juxtaposed straight edges, said hinge constraining the container to relative movement into and out of the receptacle in a plane normal to the plane of the receptacle.

6. An infusion package as defined in claim 5 in which the inner surface of the infusion container is absorbent.

**References Cited** in the file of this patent

UNITED STATES PATENTS

| Number | Name | Date |
|---|---|---|
| 2,006,678 | Kaeppler | July 2, 1935 |
| 2,072,976 | Andrus | Mar. 9, 1937 |
| 2,199,406 | Jablon | May 7, 1940 |
| 2,309,965 | Lee | Feb. 2, 1943 |
| 2,476,774 | Sears | July 19, 1949 |