

PATENT SPECIFICATION (11)

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(54) IMPROVEMENTS IN OR RELATING TO A CONTAINER

(71) We, DARTS INDUSTRIES INC., a company organized and existing under the laws of the State of Delaware, United States of America, of 8480 Beverly Boulevard, Los Angeles, California, 90051, United States of America, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention relates to a container and more particularly to a container for dispensing liquids such as for example shoyu soy sauce.

In many prior proposed types of container for dispensing liquids, there has been a tendency, during use of such containers, for liquid to drip down the sides of the containers. In addition to being an unnecessary waste of liquid, the dripping of liquid down the side of a container results in the deposit of a film which, unless wiped off, forms an undesirable and often sticky coating on the side of the container.

According to one aspect of this invention there is provided a container for dispensing liquids comprising a vessel for holding a liquid having a bottom wall and a continuous upstanding peripheral side wall terminating at an upper edge, and a seal adapted to engage said upper edge in a liquid-tight manner, said seal including a pouring spout extending upwardly therefrom and an upwardly extending wall surrounding said pouring spout, there being a channel defined between said spout and said upwardly extending wall and there being an opening in said channel the arrangement being such that, in use of said container with said seal engaging said upper edge, liquid dripping from said spout into said channel will drain through the opening and into the vessel, and said seal having a cap which is movable to a position over the pouring spout, to seal the pouring spout and said opening from the atmosphere when said seal is in engagement with the upper edge of the vessel said cap having an integral elongated strap extending therefrom with a trunion on the end

thereof, and said seal being provided with a pair of spaced U-shaped lugs integral with the top of the seal and having the open portions thereof facing away from the pouring spout, said lugs being adapted to receive said trunion in pivotal engagement therewith and being spaced from the pouring spout sufficient distance to permit the trunion to pivot in the lugs in moving said cap to a sealing position over the pouring spout, and said strap having an extension extending beyond said trunion, which extension is engageable with the top of the seal upon pivoting said cap to a position removed from its sealing position over said pouring spout, thereby to maintain said cap in a non-sealing position, said U-shaped lugs retaining said trunion therein when said extension engages the top of the seal.

According to another aspect of this invention there is provided a seal for engaging, in a liquid-tight manner a vessel for liquids, said seal including a pouring spout extending upwardly therefrom and an upwardly extending wall surrounding said pouring spout, there being a channel defined between said spout and said upwardly extending wall, and there being an opening in said channel the arrangement being such that in use of said seal in engagement with a vessel, liquid dripping from said spout into said channel will drain through the opening and into the vessel, and said seal having a cap which is movable to a position over the pouring spout, to seal the pouring spout and said opening from the atmosphere when said seal is in engagement with the upper edge of the vessel, said cap having an integral elongated strap extending therefrom with a trunion on the end thereof, and said seal being provided with a pair of spaced U-shaped lugs integral with the top of the seal and having the open portions thereof facing away from the pouring spout, said lugs being adapted to receive said trunion in pivotal engagement therewith and being spaced from the pouring spout sufficient distance to permit the trunion to pivot in the lugs in said moving cap to a sealing position over

the pouring spout, and said strap having an extension beyond said trunion, which extension is engageable with the top of the seal upon pivoting said cap to a position removed from its sealing position over said pouring spout, thereby to maintain said cap in a non-sealing position, said U-shaped lugs retaining said trunion therein when said extension engages the top of the seal.

In order that the invention may be more readily understood and so that further features may be appreciated, the invention will now be described by way of example with reference to the accompanying drawings in which:

Figure 1 is a perspective view of a container in accordance with the present invention with a container cap in a closed position;

Figure 2 is a perspective view of the top of the container shown in Figure 1 with the cap in open position;

Figure 3 is an exploded perspective view of the container shown in Figure 1;

Figure 4 is an enlarged cross-sectional view taken on the plane 4-4 of the container shown in Figure 1, with the cap in an open position;

Figure 5 is a front elevational view of the seal of the container shown in Figure 1;

Figure 6 is a side view of the seal shown in Figure 5;

Figure 7 is a top plan view of the seal shown in Figure 5;

Figure 8 is a bottom plan view of the seal shown in Figure 5;

Figure 9 is an enlarged cross-section taken from circled portion 9 of Figure 4;

Figure 10 is a side view of the cap of the container shown in Figure 1; and

Figure 11 is a top plan view of the cap shown in Figure 10.

Referring to the drawings a container in accordance with the present invention includes a cup-shaped portion having a bottom wall 5 and a continuous upstanding peripheral side wall 6 terminating in a top edge 7. The wall 6 slants slightly outwardly.

A seal is placed on the cup portion and engages the top edge 7 and the side wall 6 to form a liquid-tight connection therebetween. The seal has a peripheral inverted U-shaped groove extending around all of its periphery except in the area of a pouring spout which has a construction to be explained hereinafter. The peripheral seal in the pouring spout area shown in Figure 4 and consists of an outer wall 8. The U-shaped groove comprises an outer wall 8, an inner wall 9, and a connecting wall 10.

A generally frusto-conical pouring spout 11 is integral with and extends upwardly from the seal. The pouring spout has a pouring lip 12 affixed to its upper end at an angle of about 25° from the horizontal. The pour-

ing spout 11 has connecting wall 13 affixed to its lower end and extending outwardly therefrom. An upwardly extending wall 14 is affixed to the outer periphery of connecting wall 13 and completely surrounds the pouring spout. The connecting wall 13 slopes downwardly from the outer wall 8 (see Figure 4), the lower edge of the innermost part of the wall 14 having an opening 15 to enable any drippage or spillage from the pouring spout 11 to flow down the connecting wall 13 and eventually back into the container through the opening 15. The upper end of the wall 14 is connected to an elevated wall 16 which in turn is connected to a wall 17 which extends downwardly to a wall 18 which in turn is connected to the inner wall 9 of the U-shaped groove.

A pair of U-shaped lugs 19 are integral with the top side of the wall 16, the lugs being disposed with the open side of the U of each lug facing away from the pouring spout 11. A cap having a top wall 20 and a side wall 21 in a frustum shape is positionable over a pouring spout 11 to seal the pouring spout 11 and the opening 15 from the atmosphere. A flange 22 extends outwardly around the periphery of the cap and a locking ring 23 extends downwardly from the flange 22. The locking ring 23 has an undercut portion 24. (See Figure 9). A strap 25 is affixed to the cap structure and has a trunion 26 which is snapped into the lugs 19. The trunion 26 pivots in the lugs so that the cap can be moved from an open position as shown in solid lines in Fig. 4 to a closed position as shown in dash lines in Fig. 4. The strap 25 extends beyond the trunion 26 as a cam 27 (Fig. 11). When the cap is pivoted to the open position, approximately as shown in Fig. 2, the cam 27 engages the top wall 16 in a wedge like fit and maintains the cap in open position during dispensing of liquids from the container. The inside face of wall 14 has a slight undercut peripheral portion near its upper end (See Figure 9) so that when the cap is pivoted to the closed position, the locking ring 23 engages beneath the undercut portion on wall 14 in the manner shown in Fig. 9 effectively to seal the pouring spout in the area within wall 14 from the atmosphere.

A container in accordance with the present invention is preferably fabricated from plastics materials such as polyethylene or polypropylene. The material should have sufficient flexibility to permit the trunion 26 to be snapped into the lugs 19 but have sufficient rigidity so that the trunion is maintained within the lugs when the cam 27 engages the top wall 16. The purpose of having the lugs with the open side of the U away from the pouring spout is to ensure that the trunion is not snapped out of the lugs when the cap

is rotated to the open position and cam 27 engages wall 16.

WHAT WE CLAIM IS:—

1. A container for dispensing liquids comprising a vessel for holding a liquid having a bottom wall and a continuous upstanding peripheral side wall terminating at an upper edge, and a seal adapted to engage said upper edge in a liquid-tight manner, said seal including a pouring spout extending upwardly therefrom and an upwardly extending wall surrounding said pouring spout, there being a channel defined between said spout and said upwardly extending wall and there being an opening in said channel the arrangement being such that, in use of said container with said seal engaging said upper edge, liquid dripping from said spout into said channel will drain through the opening and into the vessel, and said seal having a cap which is movable to a position over the pouring spout, to seal the pouring spout and said opening from the atmosphere when said seal is in engagement with the upper edge of the vessel, said cap having an integral elongated strap extending therefrom with a trunion on the end thereof, and said seal being provided with a pair of spaced U-shaped lugs integral with the top of the seal and having the open portions thereof facing away from the pouring spout, said lugs being adapted to receive said trunion in pivotal engagement therewith and being spaced from the pouring spout sufficient distance to permit the trunion to pivot in the lugs in moving said cap to a sealing position over said pouring spout, and said strap having an extension extending beyond said trunion, which extension is engageable with the top of the seal upon pivoting said cap to a position removed from its sealing position over said pouring spout, thereby to maintain said cap in a non-sealing position, said U-shaped lugs retaining said trunion therein when said extension engages the top of the seal.

2. A container according to claim 1 wherein said spout is frusto-conical in shape.

3. A container substantially as herein described with reference to and as shown in the accompanying drawings.

4. A seal for engaging, in a liquid-tight manner, a vessel for liquids, said seal including a pouring spout extending upwardly therefrom and an upwardly extending wall surrounding said pouring spout, there being a channel defined between said spout and said upwardly extending wall, and there being an opening in said channel the arrangement being such that in use of said seal in engagement with a vessel, liquid dripping from said spout into said channel will drain through the opening and into the vessel, and said seal having a cap which is movable to a position over the pouring spout, to seal the pouring spout and said opening from the atmosphere when said seal is in engagement with the upper edge of the vessel, said cap having an integral elongated strap extending therefrom with a trunion on the end thereof, and said seal being provided with a pair of spaced U-shaped lugs integral with the top of the seal and having the open portions thereof facing away from the pouring spout, said lugs being adapted to receive said trunion in pivotal engagement therewith and being spaced from the pouring spout sufficient distance to permit the trunion to pivot in the lugs in moving said cap to a sealing position over the pouring spout, and said strap having an extension extending beyond said trunion, which extension is engageable with the top of the seal upon pivoting said cap to a position over said pouring spout, thereby to maintain said cap in a non-sealing position, said U-shaped lugs retaining said trunion therein when said extension engages the top of the seal.

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