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SHIPPING OR STORING A PLASTIC MILK JUG ON ITS SIDE TO CONTAIN LEAKAGE

ABSTRACT

A merchant agent obtains a plastic jug including liquid contents and secures an absorbent material to the cap or rim of the jug using an adhesive material to create a secured plastic jug. The liquid contents of the secured plastic jug may be milk, juice, or other liquid, aqueous solution, colloid solution, beverage, solvent, or chemical. For example, the secured plastic jug comprises a standard jug of milk. The merchant agent may store the secured plastic jug on its side or otherwise ship the secured plastic jug on its side. The merchant agent may ship the secured plastic jug on its side within a cooler with ice or other coolant material. In another example, the merchant agent may store the secured plastic jug on its side within a refrigerator. The secured plastic jug may leak contents of the plastic jug into the absorbent material during storage or shipping; however, the leakage should not penetrate through the adhesive material or otherwise escape to the outside of the secured plastic jug.

BACKGROUND

Shipping or storing a plastic milk jug on its side, as opposed to being shipped or stored upright, results in very high milk leakage rates. A plastic milk jug may comprise a plastic screw cap top including small gaps through which milk may leak. A high percentage of all milk jugs with a plastic cap will leak if shipped or stored on the side. Leakage of plastic jug contents, in addition to causing a loss of contents, may cause a mess in a storage refrigerator or in a shipping container, especially if a milk jug is stored with other products. A plastic milk jug is therefore transported standing upright and is not designed to be placed on its side. Additionally, milk available at grocery retailers or other merchants is not often

shipped via common carrier to an end customer due to the risk of leakage during transportation. Current shipping and storage methods do not provide the ability to store or transport milk on its side and be able to survive through heavy handling by shipping companies without leakage.

OVERVIEW

The examples described herein provide techniques to ship or store a plastic milk jug on its side and to contain leakage.

In an example, a merchant agent obtains a plastic jug including liquid contents and secures an absorbent material to the cap or rim of the milk jug using an adhesive material to create a secured plastic jug. An absorbent material may comprise a napkin and an example adhesive material may comprise packaging tape. The liquid contents of the secured plastic jug may comprise milk, juice, or other liquid, aqueous solution, colloid solution, beverage, solvent, or chemical. The secured plastic jug may comprise a secured standard jug of milk. The merchant agent may store the secured plastic jug on its side or otherwise ship the secured plastic jug on its side. The merchant agent may ship the secured plastic jug on its side within a cooler with ice or other coolant material. In another example, the merchant agent may store the secured plastic jug on its side within a refrigerator. The secured plastic jug may leak contents of the plastic jug into the absorbent material during storage or shipping; however, the leakage should not penetrate through the adhesive material or otherwise escape to the outside of the plastic jug.

EXAMPLE PROCESSES AND ARCHITECTURE

With reference to Figures 1 and 2, shipping or storing a plastic jug containing liquid contents on its side and to contain leakage will be described.

A merchant agent may obtain a strip of absorbent material 101. For example, the absorbent material 101 comprises a rectangular paper napkin, and the merchant agent makes the strip of absorbent material 101 by folding the rectangular paper napkin into thirds. The napkin may have dimensions of 7.5 inches by 4.5 inches, and the merchant agent folds the napkin into thirds to form a folded napkin measuring 7.5 inches by 1.5 inches. In another example, the strip of absorbent material 101 does not need to be folded or prepared and already comprises the desired dimensions.

The merchant agent wraps the strip of absorbent material around the base of the cap or rim on a plastic jug 102. The plastic jug may be a plastic jug 102 of milk, juice, or other liquid, aqueous solution, colloid solution, beverage, solvent, or chemical. The edges of the strip of absorbent material 101 may touch, for example, they touch or may be overlapped. In another example, the edges of the strip of absorbent material 101 slightly overlap. Then, the merchant agent wraps an adhesive material 103 around the outside of the wrapped absorbent material 101 to secure the wrapped absorbent material 101 to the plastic jug 102. The adhesive material 103 may comprise a strip of tape, and the merchant agent cuts a strip of tape that is long enough to be wrapped twice around the cap or rim of the milk jug and wraps the piece of tape tightly around the wrapped absorbent material 101 to secure the wrapped absorbent material 101 to the cap or rim of the plastic jug 102. Tape may comprise packaging tape or other non-absorbent, adhesive material 103.

Figure 2 illustrates a secured plastic jug 102 including an absorbent material 101 wrapped around the cap or rim of the plastic jug 102 that is secured to the plastic jug 102 via

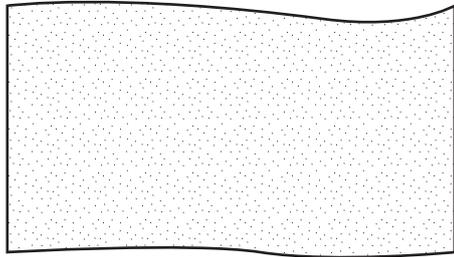
an absorbent material 101. The adhesive material 103 in Figure 2 is shown as clear and transparent so that the absorbent material 101 may be seen through the tape.

In certain examples, the merchant agent pre-prepares or otherwise obtains a combined adhesive-absorbent strip including a strip of absorbent material 101 pre-attached or otherwise integrated into the adhesive side of a larger strip including an adhesive material 103. In these other examples, the merchant wraps the combined adhesive-absorbent strip around the cap or rim of the plastic jug 102 to secure the absorbent material 101 to the cap or rim of the plastic jug 102 via the adhesive material 103.

The merchant agent may store the plastic jug 102 on its side or otherwise packs the plastic jug 102 on its side within a box or a cooler for shipping. For example, if the plastic jug 102 comprises a plastic jug 102 of milk, the merchant agent stores the plastic jug of milk on its side in a refrigerator or packs the plastic jug 102 of milk into a cooler with ice or other coolant material. In some examples, the plastic jug 102 may leak contents of the plastic jug 102 into the absorbent material during storage or shipping; however, the leakage should not penetrate through the adhesive material or otherwise escape to the outside of the secured plastic jug 102 and adhesive material/absorbent material combination.

The containers described herein provide a solution to the problem of storing and/or transporting plastic jugs 102 including liquid contents on their side without risking leakage of the liquid contents from the small gaps in the caps of the plastic jugs 102. By using and relying on the methods and systems described herein, a merchant system may be able to save significant space inside of a shipping or storage box by being able, in addition to storing plastic jugs upright, to store plastic jugs on their sides through the methods described herein.

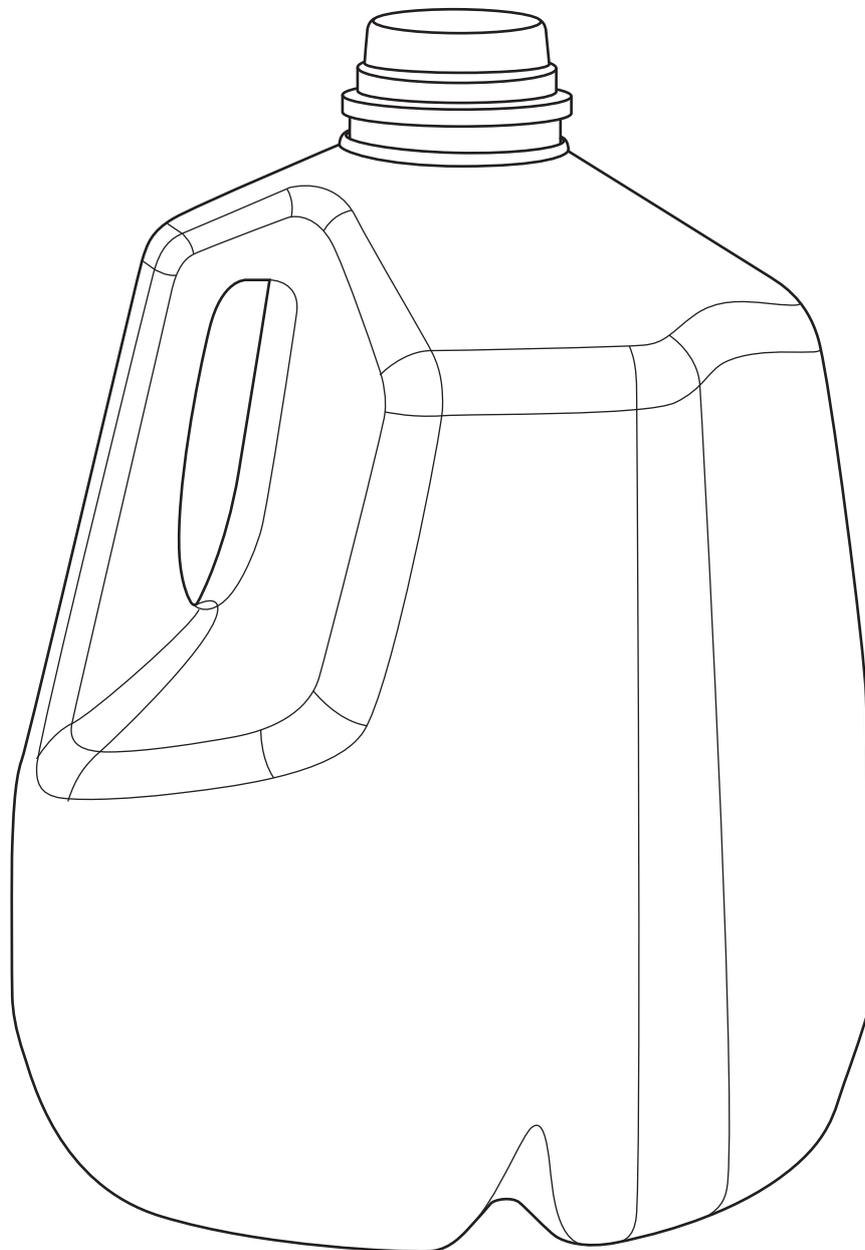
1 / 2



Absorbent material 101



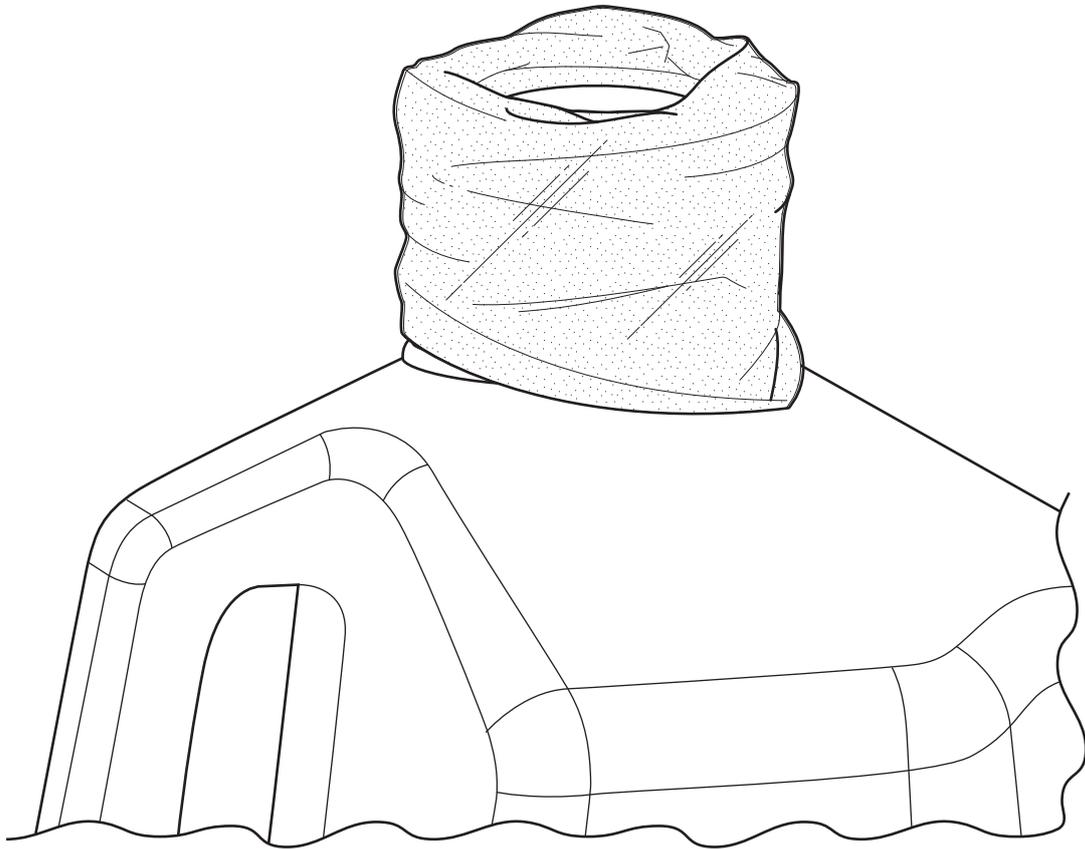
Adhesive material 103



Plastic jug 102

FIG. 1

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Secured plastic jug 201

FIG. 2