Sept. 30, 1930. W. T. MOONEY 1,777,102

BOTTLE CARRYING DEVICE

Filed Feb. 5, 1929

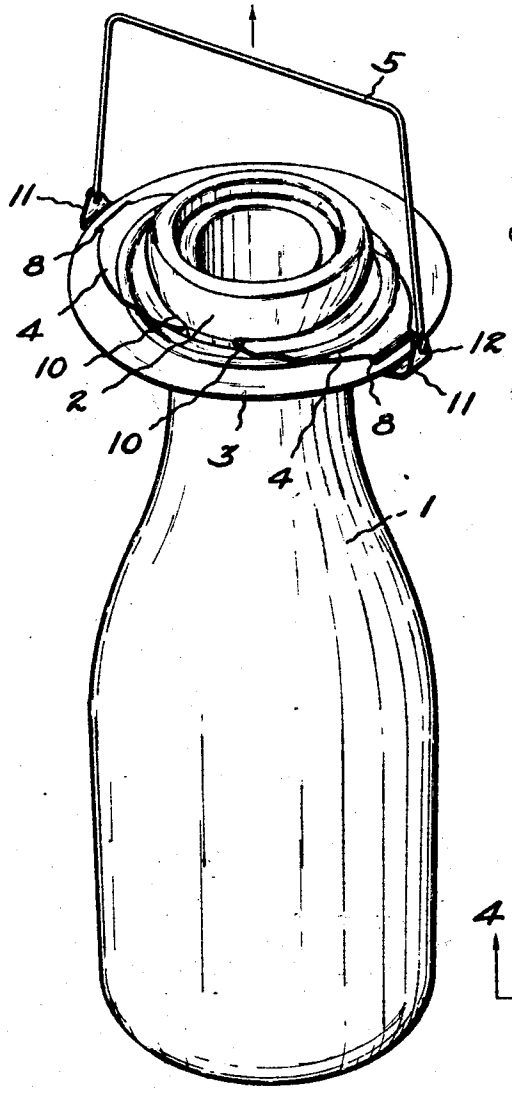


Fig. 1.

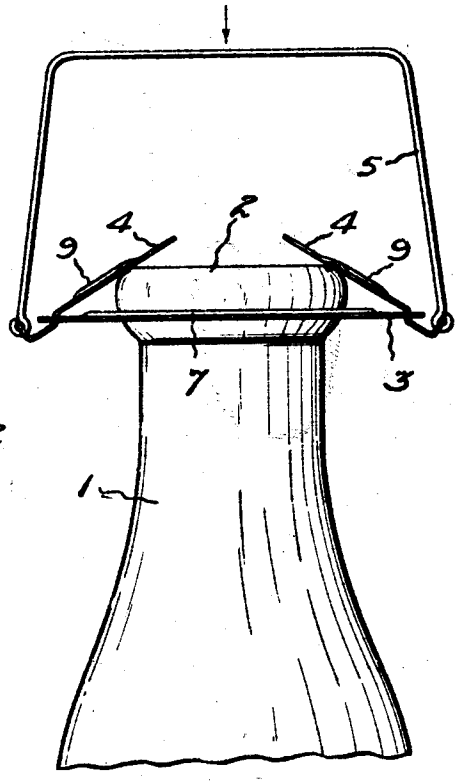


Fig. 2.

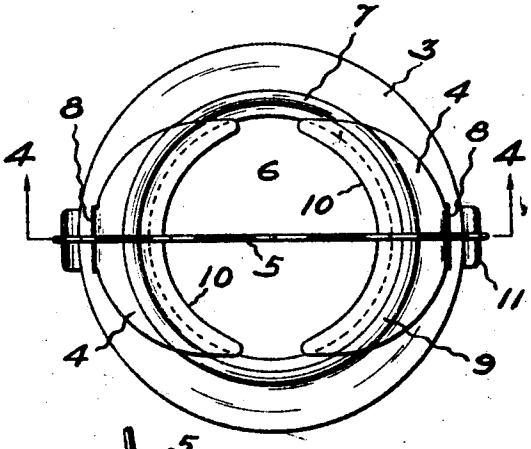


Fig. 3.

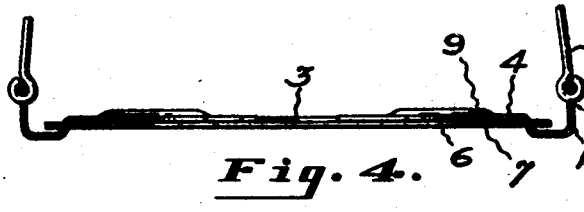


Fig. 4.

INVENTOR
WILLIAM T. MOONEY
BY
Evans and McCoy
ATTORNEYS.

Patented Sept. 30, 1930

1,777,102

UNITED STATES PATENT OFFICE

WILLIAM T. MOONEY, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF TO WILLIAM J. GARVIN, OF CLEVELAND, OHIO

BOTTLE-CARRYING DEVICE

Application filed February 5, 1929. Serial No. 337,708.

This invention relates to bottle carrying devices and more particularly to a device for carrying a bottle having the general characteristics of a milk bottle.

The principal object of my invention is to provide a new and novel means for carrying bottles which is simple in construction, economical to manufacture, and which can be easily attached to the bottle that is to be carried.

Another object is to provide a new and novel device whereby bottles may be easily and safely carried without danger of dropping and breaking the same.

Another object is to provide a device for carrying bottles with means for automatically gripping the bead formed around the mouth of the bottle.

A further object is to provide a device for carrying bottles with a bail and hinged means adapted to allow the device to be slipped over the top of the bottle, which means, when tension is exerted on the bail, automatically grips the top of the bottle so that the same may be carried by the bail.

A still further object is to provide a device for carrying bottles comprising an annular ring adapted to be slipped over the neck of the bottle, a bail, means hinged to the ring and pivoted to the bail, which means is adapted to grip the bead surrounding the mouth of the bottle when a tension is exerted on the bail.

These being among the objects of the present invention, the same consists of certain features of construction and combinations of parts to be hereinafter described with reference to the accompanying drawing and then claimed, having the above and other objects in view.

In the accompanying drawing, which illustrates a suitable embodiment of the present invention:

Figure 1 is a perspective view of a milk bottle having the carrying device attached thereto so that it can be easily carried.

Fig. 2 is a fragmentary elevation of the upper portion of the bottle showing the carrying device as it is being slipped over the mouth of the bottle.

Fig. 3 is a plan view of the carrying device.

Fig. 4 is an enlarged transverse section of the carrying device taken substantially on the line 4—4 of Fig. 3.

Bottles of the class used for conveying milk and the like are bulky and very hard to carry. This is particularly true when a person purchases several articles at a store together with a bottle of milk. When the purchaser attempts to carry a bottle of milk together with several other bundles and packages to his home he encounters several difficulties. The bottle filled with milk is fairly heavy and slippery and slips in his hand because he cannot firmly grip the same. A child sent to a store for milk has considerable difficulty in bringing the bottle home because his hands are not large enough to grasp the neck of the bottle. Consequently he must carry the bottle in his arms, and before he travels very far the bottle suddenly slips from his arms and crashes on the sidewalk and breaks, spilling the contents. This happens time and time again and causes great annoyance and, in many cases, loss of time.

It is therefore the aim of this invention to provide a satisfactory means for easily carrying milk bottles and the like without danger of dropping and breaking the same.

Referring to the accompanying drawing, in which like numerals refer to like parts throughout the several views, the bottle 1 shown for illustration is of the conventional milk bottle variety, having a reduced neck portion which terminates in an enlarged bead 2 at the mouth thereof. The carrying device for the bottle 1 is adapted to be dropped downwardly over the neck of the bottle and then raised upwardly so that certain members thereon engage the bead 2 of the bottle. The bottle then can be carried safely and easily in one hand by grasping the bail of the carrying device.

As shown in Figs. 3 and 4, the carrying device principally comprises a supporting base 3, bottle engaging members 4, and a bail 5. The supporting base 3 is stamped from a single metal plate and is formed with a central opening 6 silghtly larger in diameter than the bead 2 of the top of the bottle

1, and with an annular bead 7 adjacent to the edge of the central opening 6. The opening 6 and the annular bead 7 may be formed in the supporting base 3 at the same time the base is blanked from the single metal plate. The base 3, in other words, can be completely formed in a single stamping operation. The base 3 is also formed with diametrically opposite rectangular slots 8 adjacent to the outer edge thereof for a purpose which is about to be described.

The bottle engaging members 4 are each stamped in a single operation from a single metal plate and each is formed with a curved bead 9 having the same radius as the bead 7 of the base 3 and with curved inner edge 10 having a radius slightly larger than the neck of the bottle 1 and somewhat less than the radius of the bead 2 at the mouth of the bottle. Each bottle engaging member 4 is preferably formed, as shown in Figs. 3 and 4, with a projecting tongue 11 at its outer edge midway between its ends, which tongue 11 is bent downwardly, then horizontally outwardly, and is finally flanged vertically upwardly and provided with an opening 12 adjacent to the marginal edge thereof.

One of the bottle-engaging members 4 is assembled to the base 3 by extending its tongue 11 through one of the slots 8 in the base 3 from the upper side thereof so that it assumes the position shown in Fig. 4 with its depression formed by the bead 9 thereof nesting with the bead 7 of the supporting base 3. The other bottle-engaging member 4 is likewise assembled to the base 3 in a similar manner with its projecting tongue extending through the other base slot 8. The free ends of the bail 5 are hooked through the openings 12 in the ends of the tongues 11 of the bottle-engaging portions.

The carrying device in its assembled position, therefore, consists of the annular supporting base 3, a pair of diametrically opposed bottle-engaging members 4 hingedly supported by the base 3 and nested upon the upper surface thereof, and a bail 5 interconnecting the ends of the bottle-engaging members. Because of the fact that the radii of the curved edges 10 of the bottle-engaging members 4 are less than the radius of the bead 2 at the top of the bottle, and have the same axis, the distance between these edges 10 consequently must be less than the diameter of the widest portion of the bead 2.

When the carrying device is supported by the bail 5 the weight of the annular supporting base 3 causes the bottle-engaging members to pivot about the upper inner marginal edges of the slots 8 in the base 3 as fulcrums. Now, when it is desired to carry a bottle with this device, the same is placed over the top of the bottle with the base 3 surrounding the bead 2 of the bottle 1 and with the top of the bottle engaging the lower sides of the members 4. As soon as the person holding the bail 5 of the carrying device releases his hold upon the same and allows the device to be supported by the top of the bottle, the weight of the annular supporting base 3 being greater than the members 4 causes the members 4 to swing about the lower outer edges of the slots 8 as axes and assume a position similar to that shown in Fig. 2. Further release, by the person holding the device, of upward force on the bail 5 allows the base 3 to move downwardly around the neck of the bottle until the hinged bottle-engaging members 4 swing through an arc large enough for the edges 10 to clear the sides of the bead 2 of the bottle 1. The weight of the supporting base 3, as soon as the bottle-engaging members 4 clear the bead 2, then causes the bottle-engaging members 4 to assume their normal position in nested relationship with the supporting base 3. The holder of the device then pulls upwardly on the same with the result that the inner edges 10 of the bottle-engaging members 4 engage the bead 2 of the bottle and lift the bottle so that it can be carried by merely grasping the bail 5. When it is desired to remove the carrying device the holder releases his grip on the bail 5 to allow the device to drop sufficient distance so that he can hold the base 3 with one hand and force downwardly with the other hand to swing the engaging members 4 to maximum open position. The device can then be easily lifted off the bottle.

It is apparent from the drawing and foregoing description that a device is provided by the present invention whereby milk and similar bottles may be easily carried from one place to another without danger of the same slipping and breaking, and particularly that it is very easy for children to carry the same.

It is further apparent that the bottle-carrying device of the present invention is very simple in construction and that it consists of few parts which can be easily and economically made from sheet metal stampings.

It is to be understood, however, that the type of bottle shown and described and the shape of the parts of the bottle-carrying device are presented for purposes of explanation and illustration, that the carrying device is adaptable for use with many types of bottles other than the conventional milk bottle, and that various modifications of the invention described can be made without departing from the spirit and substance of the broad invention, the scope of which is commensurate with the appended claims.

What I claim is:

1. A device for carrying bottles comprising a support, oppositely disposed bottle-engaging members pivoted to said support, and a bail interconnecting said bottle-engaging

members for holding the same in engagement with a portion of said bottle while said bottle is being carried.

2. A device for carrying bottles comprising a support having an opening therein of greater diameter than the top of the bottle to be carried, bottle-engaging members pivoted to said support at diametrically opposed sides of said opening, and a bail interconnecting said bottle-engaging portions for holding the same in engagement with a portion of said bottle while said bottle is being carried.

3. A device for carrying bottles comprising a support having a central opening therein, an annular bead in said support concentrically positioned with respect to said opening, a pair of bottle-engaging members pivoted to said support at opposite sides thereof, a bail interconnecting said members, and depressions in said engaging members having the same radii as said bead in said support and being adapted to nest with said bead when said members are in normal bottle-engaging position.

4. A device for carrying bottles comprising a support having a central opening and slots at diametrically opposite sides thereof, a pair of oppositely disposed bottle-engaging members having projections thereon extending through said slots whereby said members are hingedly supported by said support, and a bail interconnecting said projections for holding said members in engagement with a portion of the bottle to be carried.

5. A device for carrying bottles comprising an annular support adapted to surround the neck of the bottle to be carried, in spaced relationship thereto, and being formed with diametrically opposite slots, spaced diametrically opposite bottle-engaging members, the distance between the inner edges of said members being less than the diameter of the opening in said support, tongues formed integral with said members extending downwardly through said slots in said support and terminating outwardly of said support, and a bail interconnecting said terminating ends of said tongues to hold said bottle-engaging members in engagement with said bottle while it is being carried by means of said bail.

6. The combination, with a bottle having a reduced neck portion and an enlarged mouth portion, of a carrying means for said bottle comprising an annular support adapted to surround the neck of said bottle in spaced relationship, spaced members hingedly carried by said support for engaging the enlarged mouth portion of said bottle, and a bail for carrying said bottle interconnecting said members, said bail holding said members in engagement with said mouth portion while said bottle is being carried.

7. The combination, with a bottle having a reduced neck portion and an enlarged mouth portion, of a carrying device for said bottle comprising an annular support adapted to surround the neck of said bottle in spaced relationship thereto, spaced bottle-engaging members being hingedly carried by said support, the normal distance therebetween being less than the opening in said support, greater than the diameter of said neck portion, and less than the diameter of said mouth portion, and a bail interconnecting said bottle-engaging members, said bail permitting swinging movement of said members to clear said mouth portion while said carrying device is being attached to said bottle and afterward for holding said members in engagement with said enlarged mouth portion while said bottle is being carried.

8. A device for carrying bottles comprising an annular support having a central opening therein of greater diameter than the neck of the bottle to be carried and adapted to surround the neck thereof in spaced relationship, a bottle engaging member hinged to said annular support and extending inwardly beyond the edge of said opening to engage the neck of the bottle being carried, and a bail for carrying said device.

In testimony whereof I affix my signature.

WILLIAM T. MOONEY.