

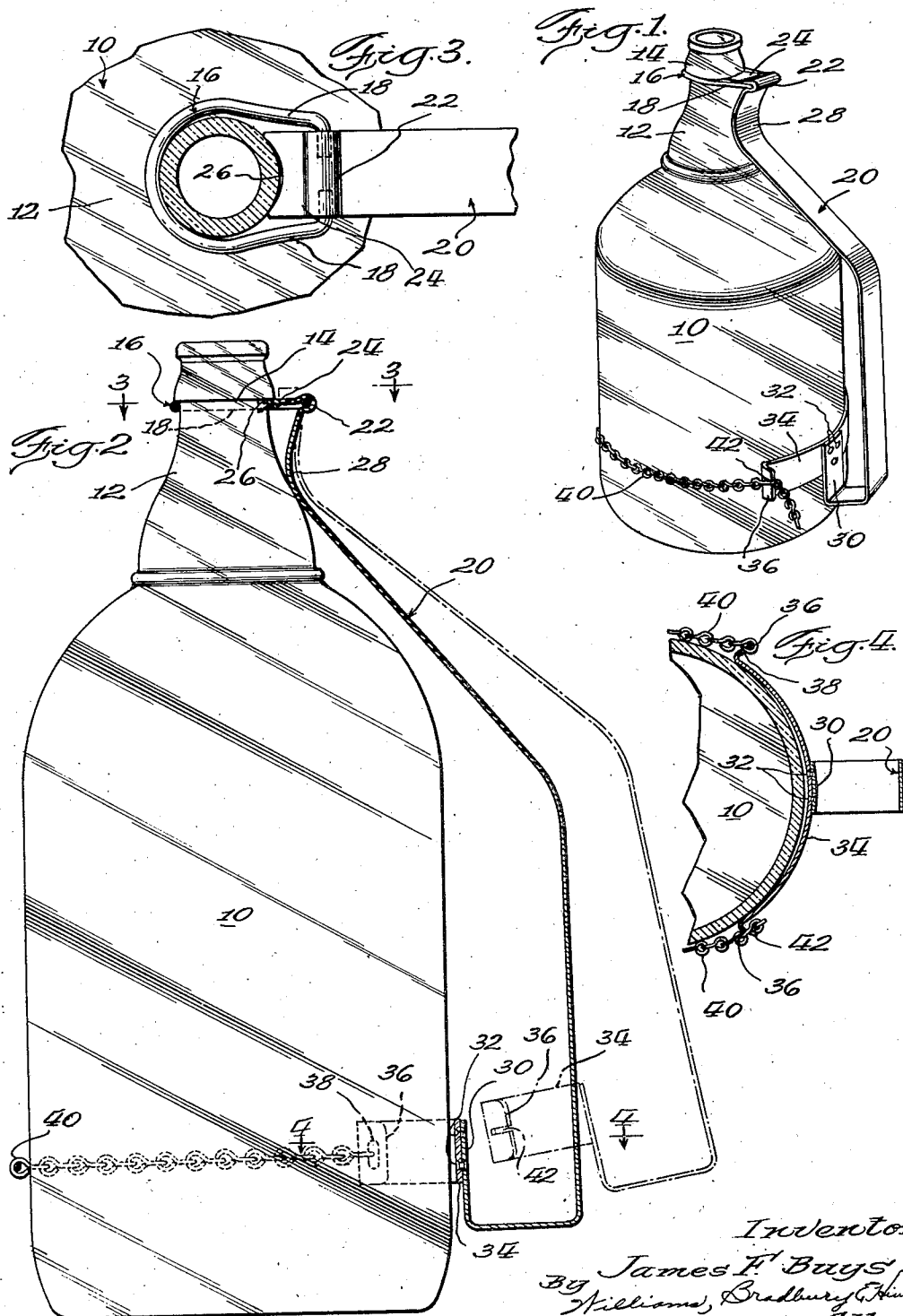
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HANDLE

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HANDLE

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This invention relates to handles and more particularly to a handle adapted for removable attachment to a bottle having an enlargement at the upper end of the neck, for instance, bottles of the crown cap sealed type.

Although a handle incorporating the present invention can be used with bottles of various sizes, it is particularly useful in converting crown cap sealed bottles of the half gallon size into jugs so that they may be handled more easily.

It is an object of the present invention to provide a novel low cost device which may be quickly attached to a bottle to convert the bottle into a jug.

An additional object of the present invention is to provide a novel handle which may be quickly attached to bottles of different sizes so as to enable the bottles to be handled more easily, and which may be quickly removed from one bottle and attached to a different bottle of like type.

Other objects and advantages will become apparent from the following description of a preferred embodiment of my invention taken in conjunction with the accompanying drawing, in which:

Fig. 1 is a perspective view of a bottle shown with a handle incorporating the present invention secured thereto;

Fig. 2 is a side elevation of the bottle shown in Fig. 1 with the handle attached thereto shown in vertical longitudinal section. Fig. 2 also shows in phantom one position assumed by the handle during its attachment to the bottle;

Fig. 3 is a fractional sectional view taken through the bottle along the line 3—3 looking downwardly as indicated by the arrows; and

Fig. 4 is a fractional horizontal sectional view through the lower portion of the handle, and may be considered as taken in the direction of the arrows along the line 4—4 of Fig. 2.

The handle of the present invention is shown in conjunction with a half gallon crown cap sealed bottle 10 of the type usually used to contain beer, chemical bleaches used in the household, and other liquids. A bottle of this type comprises a large cylindrical body portion provided at its upper end with a generally tapering neck 12, toward the upper end of which a shoulder 14 is provided.

The handle is comprised of a ring 16, made preferably of steel wire, which is adapted to encircle the neck of the bottle beneath the shoulder 14. This ring, which is sufficiently large to slip over the upper end of the bottle neck and over the shoulder 14, has arms 18 extending outwardly away from the major portion of the loop. Toward their outward ends, at a distance of a matter of three-fourths of an inch or so from the bottle neck, these arms are bent into alignment facing each other. A piece of strip metal 20 is

bent over at one end at 22 and crimped around the aligned portions of the arms 18, so that the strip metal is journaled to pivot about the aligned portions of the arms 18, but is prevented from being separated therefrom.

The extreme upper end of the strip 20 is bent outwardly to form a clamping member 24 having its end formed with an arcuate re-entrant surface 26 adapted generally to fit the curvature of the bottle neck. This clamping member 24 is so proportioned that when the strip 20 is rotated relative to the ring 16 in such a manner that the clamping member 24 points substantially downwardly, the ring can be slipped over the shoulder 14. However, when the strip 20 is rotated so as to move the clamping member 24 upwardly, the arcuate portion will embrace the neck of the bottle beneath the shoulder 14, and continued relative movement between the ring and the strip 20 will clamp the ring 16 tightly about the bottle neck with the clamping member 24 extending substantially radially outwardly at right angles to the bottle neck.

Just beneath the ring 16 the strip 20 is bent downwardly and inwardly toward the bottle so that when the clamping member 24 is in clamped position, that is, is extending substantially straight inwardly from the ring to the bottle neck, a curved portion 28 of the strip 20 will rest against the bottle neck in a position somewhat below the shoulder 14. From the point 28, the strip is bent so that it extends downwardly and outwardly and is further bent to form a handle which can be grasped in the hand of the user. At its lower end 30, the strip is bent inwardly and upwardly and is secured by means of rivets 32, spot welds or other suitable attaching means to a second bottle embracing strip 34 extending at right angles thereto. This second strip 34 is generally arcuate in shape and has a radius of curvature somewhat less than the radius of curvature of the bottle to which the handle is intended to be attached, while its length is approximately one-fourth the bottle's circumference.

The outward ends of the strip 34 are bent sharply outwardly and somewhat rearwardly, i. e., somewhat more than 90°, to provide tabs 36 at each end of the strip 34. One of these tabs has a hole 38 punched therethrough, through which one end of a single jack chain 40 is secured. The other of these tabs is provided with a radially outwardly extending slot 42. The width of this slot is somewhat greater than the thickness of the wire from which the jack chain is made, but is considerably less than the width of the chain links.

The strip 20 is so shaped below the portion 28 resting against the neck of the bottle that when the clamping member 24 is clamped be-

neath the shoulder 14 and the curved portion 28 is resting against the bottle neck, the lower bottle embracing portion 34 of the handle will be spaced a matter of three-quarters of an inch or so from the face of the bottle. Thus, to bring the lower end of the handle into face to face engagement with the lower portion of the bottle, it will be necessary to overcome the springiness inherent in the strip 20. Likewise, since the radius of curvature of the bottle embracing strip 34 is somewhat less than the radius of curvature of the bottle, it will be necessary to clamp the handle against the bottle with sufficient force to spring the outer ends of the strip 34 outwardly somewhat in order to bring the central portion of this member against the bottle.

In attaching my handle to a bottle, the handle is rotated outwardly relative to the ring sufficiently to permit the ring to be slipped over the neck of the bottle and into a position beneath the shoulder 14. The handle is then swung inwardly to bring the clamping member 24 beneath the shoulder 14 and to cause the ring tightly to embrace the bottle neck. The lower portion of the handle is then pressed inwardly toward the bottle against the springiness of the strips 20 and 34 to bring the inner face of the strip 34 into close embracement of the bottle surface. With the handle held in this position, the chain 40 is wrapped around the bottle and pulled comparatively tight and one of the links near its free end is hooked into the slot 42. The handle is then released and permitted to spring outwardly slightly away from the lower portion of the bottle to tighten the chain 40.

Since the degree of adjustment of the chain is limited by the spacing between the links of the chain, it will be appreciated that it will seldom be possible to have the strip 34 in full contact with the lower portion of the bottle after the handle has been released. However, because of the springiness in the strips 20 and 34, the slack in the chain will be taken up, and the handle will be prevented from becoming separated from the bottle even though its lower end may be spaced outwardly from the bottle a matter of a quarter of an inch or so.

To remove the handle from the bottle, it is necessary merely to press the handle inwardly slightly and unhook the chain from the slot 42, after which the handle can be swung outwardly and the ring 16 lifted from the bottle neck.

From the above description of a preferred embodiment of my invention, it will be seen that I have provided a handle for a bottle that is readily attachable and removable from the bottle, and that this handle can be manufactured by modern production methods at very low cost.

Having thus described my invention, what I claim as new and useful and desire to secure by Letters Patent of the United States is:

1. A handle for attachment to a bottle comprising a loop to slip over the bottle neck, a clamping member rotatably attached to the loop and adapted when in one position to clamp the loop tightly about the bottle neck, a portion extending downwardly from the loop and attached to the clamping member and adapted when the clamping member is in clamping position to rest against the side of the bottle at a point below said clamping member and to stand outwardly

away from the neck of the bottle when said clamping member is in unclamping position, a bottle embracing member secured to the lower end of the said portion, and means to secure the bottle embracing member to the lower portion of the bottle after the downwardly extending portion has been rotated from unclamping to clamping position, the last said means being adapted to prevent unclamping of said clamping member by preventing outward movement of the downwardly extending portion attached to the clamping member.

2. A handle for attachment to a bottle having a neck with a shoulder thereon, comprising a loop to slip over the bottle neck into a position beneath the shoulder, a clamping member rotatably attached to the loop and adapted when in one position to clamp the loop tightly about the bottle neck, a portion extending downwardly from the loop and attached to the clamping member and adapted when in free position to be inclined generally outwardly away from the bottle when the clamping member is in clamping position, the said portion being formed of spring material, a bottle embracing member secured near the lower end of the last said portion and being formed to extend partially around the face of the bottle, a chain secured to one end of said bottle embracing member, and means at the other end of said bottle embracing member adapted for attachment to said chain.

3. A handle for attachment to a bottle having a neck with a shoulder thereon, comprising a loop to slip over the bottle neck into a position beneath the shoulder, a clamping member rotatably attached to the loop and adapted when in one position to clamp the loop tightly about the bottle neck, a portion extending downwardly and inwardly from the loop and attached to the clamping member and adapted to rest against the bottle when the clamping member is in clamping position, the last said portion having a further extension inclined downwardly and outwardly away from the bottle when in free position, a bottle embracing member secured near the lower end of the last said portion, a chain secured to one end of said bottle embracing member, and means at the other end of said bottle embracing member adapted for attachment to said chain.

4. A handle for attachment to a bottle having a neck with a shoulder thereon, comprising a loop to slip over the bottle neck into a position beneath the shoulder, a clamping member rotatably attached to the loop and adapted when in one position to clamp the loop tightly about the bottle neck, a portion extending generally downwardly from the loop and attached to the clamping member and adapted when in free position to be inclined generally outwardly away from the bottle when the clamping member is in clamping position, the said portion being formed of spring material, a bottle embracing member secured in the lower end of the last said portion and adapted to stand away from the side of the bottle when the last said portion is in free position, a chain secured to one end of said bottle embracing member, and means at the other end of said bottle embracing member adapted for attachment to said chain.

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