Sept. 18, 1956 F. D. YOUNG ET AL 2,763,414

HANDLE FOR MILK CARTONS

Filed May 13, 1954

Fig. 1.

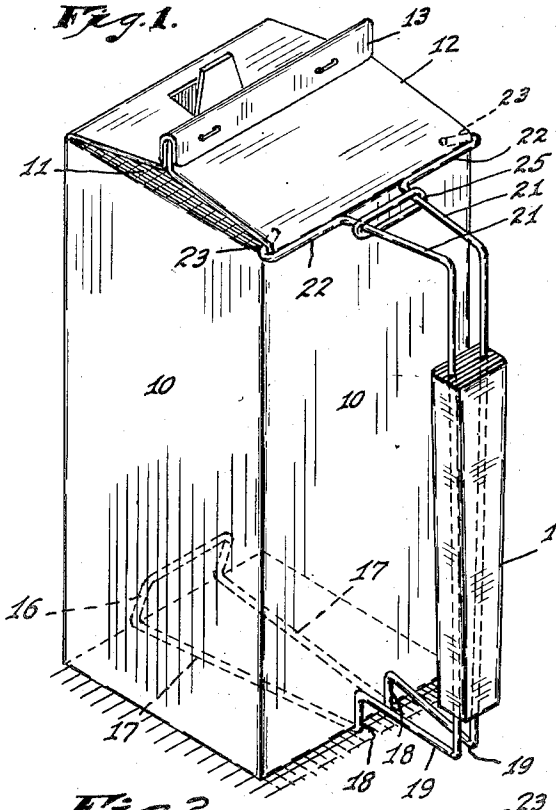


Fig. 4.

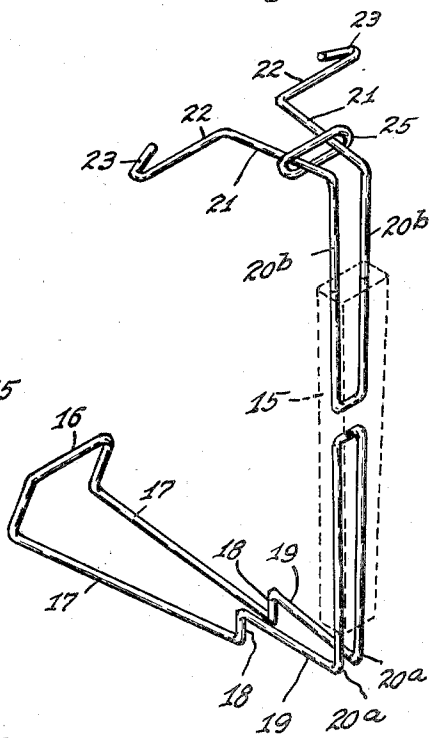


Fig. 2.

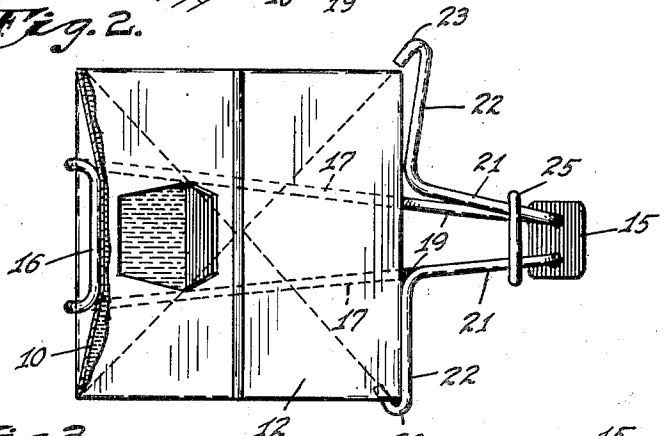
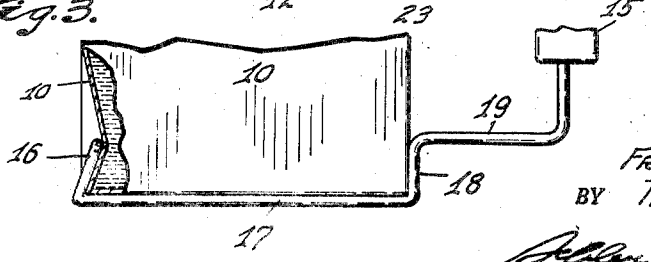


Fig. 3.



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HANDLE FOR MILK CARTONS

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Milk is frequently sold at the present time in cardboard cartons having the general form of an upright parallelepiped. These cartons, especially in the larger sizes, are difficult to grasp and manipulate.

It is therefore an object of this invention to provide a handle which can be readily and removably attached to a milk carton, which can be simply and economically manufactured, and which will possess a grip portion that can readily be grasped in the hand to facilitate manipulation of the carton.

The upper end of the ordinary parallelepipedal milk carton is usually closed by folding inwardly the upper portions of its four side walls, two opposite side walls being folded in first and the other two side walls being folded in next, the folding operation creating pleats the creases of which extend diagonally inwardly from the corners of the carton. In providing a handle for use in association with such carton, we employ an elongated grip portion from the upper and lower ends of which two carton engaging elements, conveniently of wire, project. The lower of such elements has a downwardly offset portion providing a vertical shoulder and extends across the bottom of the carton from such shoulder to the remote side of the carton where it is provided with an up-bent end between which and the shoulder the base of the carton is received. The upper-carton engaging element comprises a pair of arms having in-bent ends adapted to be received in the above mentioned pleats. The in-bent ends may be releasably held in the pleats by the resilience of the arms forming the upper-carton engaging element; but preferably such arms embody portions which diverge toward the carton and are embraced by a link which can be moved toward the carton to draw the in-bent ends toward each other and retain them within the pleats.

The accompanying drawing illustrates the invention:

Fig. 1 is an isometric view showing a handle in place on a carton;

Fig. 2 is a plan view showing the handle in the course of being applied to the carton;

Fig. 3 is a fragmental side elevation in partial section illustrating the lower portion of the carton with handle applied; and

Fig. 4 is an isometric view of a modified handle removed from association with the carton, the grip portion of the handle being illustrated in dotted lines.

The milk carton to which our handle is intended to be applied has side walls **10** which, at the top of the carton, are folded inwardly to provide a closure. Specifically, the upper portions **11** of two opposed side walls are folded inwardly first, and the upper portions **12** of the other side walls are then folded inwardly above them and have their edges sealed together as indicated at **13**. The infolded wall-portions **11** and **12** are joined by pleats, indicated by dotted lines in Fig. 2, in which the upper portion of our handle engages in a manner to be explained hereinafter.

The handle illustrated in the drawing comprises a rigid grip portion **15** from the upper and lower ends of which

there project elements adapted to engage the carton. In the handle shown in Figs. 1 to 3, both the upper and lower carton-engaging elements are formed from a single length of wire. At the midpoint of its length, such wire is bent to form a carton-engaging shoulder **16** of inverted U-shape. From the ends of the shoulder **16**, the wire extends in horizontal stretches **17** for a distance substantially equal to the width of the carton and then is offset upwardly to provide a pair of shoulders **18** opposed to the shoulders **16**. From the upper ends of the shoulders **18** the wire extends in horizontal arms **19** for a distance and then vertically upwardly through the grip portion **15**. At a distance above the horizontal stretches **17** equal to the height of the carton, the wire is bent inwardly to extend in two upper arms **21** to a point directly above the shoulders **18**. From the end of each arm **21**, the wire runs outwardly along the upper edge of the carton as indicated at **22**; and, at the corners of the carton, the wire is bent inwardly to form hooks **23** which enter the aforesaid pleats.

An alternative construction is illustrated in Fig. 4, where the portions **16** to **19** of the lower carton-engaging element and the portions **21**, **22**, and **23** of the upper carton-engaging element are identical with the correspondingly numbered portions of the handle shown in Fig. 1. The difference between the handles of Figs. 1 and 4 lies in the fact that the latter handle is formed of two pieces of wire one forming the lower carton-engaging element and terminating in two general vertical legs **20***a* which enter the lower end of the grip-portion **15** and the other terminating in vertical legs **20***b* which enter the upper end of such grip portion.

The wire element or elements may be united with the grip portion **15** in any convenient manner. For example, the grip portion may be molded of plastic around the wire element or elements, or it may be made of two pieces of wood routed out to receive the wire elements and secured together in any convenient manner.

To prevent relative movement of the grip portion **15** and the wire-portions it engages such wire-portions may be provided with offsets or lateral extensions fitting complementary recesses in the grip portion and serving to locate the wire both longitudinally of itself and about its axis. Thus, in Fig. 4, the ends of the legs **20***a* may be bent toward each other and preferably welded together. In the case of the upper element in Fig. 4, where the ends of the single length of wire forming the upper element lie outside the grip portion, the center portion of the wire, which joins the lower ends of the two legs **20***b*, constitutes a common lateral extension for both legs.

Desirably, the U-shaped shoulder **16** lies at an acute angle to the common plane of the horizontal stretches **21**, as will be clear from Fig. 3, so that it will indent the side wall of the carton which it engages and improve the firmness with which the handle grips the carton. The inherent resilience of the wire may be relied upon to maintain the hooks **23** in engagement with the pleats at the upper end of the carton, but we prefer to form the upper carton-engaging element in such a manner that its arms **21** diverge toward the carton and to surround such arms with a link **25** which can be forced toward the carton to draw the arms **21** together and hold the hooks **23** in firm engagement.

When a handle embodying our invention is applied to a carton in the manner illustrated and above described, the carton is firmly held in association with the handle and can readily be lifted and manipulated for pouring through the medium of the handle.

It will be understood that the specific embodiments of the invention shown and described are set forth merely by way of illustration, that other modifications are possi-

ble, and that the scope of the invention is to be measured by the annexed claims.

We claim as our invention:

1. A handle for a milk carton, comprising a generally vertical grip and upper and lower laterally projecting, carton-engaging elements secured to said handle, said lower element having a horizontal portion adapted to extend across the bottom of the carton and two upwardly projecting shoulders at the ends of said horizontal portion for engagement with opposite sides of such carton, said upper element comprising a pair of opposed hooks movable toward and away from each other to engage and disengage said carton.

2. A handle as set forth in claim 1 with the addition that said upper element includes a pair of arms which diverge away from said grip and terminate respectively in said hooks, and a link embracing said arms and movable therealong in the direction of their divergence to draw them together and hold the hooks in engagement with the carton.

3. A handle as set forth in claim 1 with the addition that said lower element is formed from a single length of wire the mid-portion of which is bent into an inverted U-shape to provide one of said shoulders, the wire extending in two horizontal stretches from the base of said U-shaped shoulder toward the grip, each such wire stretch being bent to extend upwardly for a distance to provide the other of said shoulders, thence horizontally toward the grip, and finally upwardly to enter the grip.

4. A handle as set forth in claim 1 with the addition that said upper portion comprises a single length of wire the ends of which are bent to form said hooks, the wire extending from the bases of said hooks in two generally aligned stretches toward a point between the hooks, being bent to form generally horizontal arms projecting from the adjacent ends of said stretches toward the grip, and the wire at the ends of such arms being bent to extend downwardly and enter the grip.

5. A handle as set forth in claim 4 with the addition that said arms converge toward the grip and are embraced by a link which is movable along the arms away from the grip to draw the arms and their opposed hooks together.

6. A handle as set forth in claim 1 with the addition that one of said shoulders forms an acute angle with said horizontal portion.

7. A handle for a milk carton, comprising a generally vertical grip and upper and lower laterally projecting, carton-engaging elements secured to said handle, said lower element having a horizontal portion adapted to extend across the bottom of the carton and two upwardly projecting shoulders at the ends of said horizontal portion for engagement with opposite sides of such carton, said upper element comprising means engageable with the upper portion of the carton to hold it in an upright position with its bottom disposed on said horizontal portion between said shoulders.

8. A handle as set forth in claim 7 with the addition that said upper element includes at least one hook portion engageable with the carton to prevent movement of the top thereof away from said grip.

9. A handle as set forth in claim 7 with the addition that said upper element includes portions engaging opposite sides of the carton and a hook engageable with a fold in the carton to prevent movement of the top of the carton away from said grip.

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