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Vandergeeten

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[54] **BASKET FOR A BOTTLE WASHING MACHINE**

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[52] **U.S. Cl.** **211/74,** 134/152, 198/131

[51] **Int. Cl.** **A47b 73/00,** B67c 1/16

[58] **Field of Search** ..... 211/72, 74; 198/131; 141/375; 134/74, 131, 152, 166 C

[56] **References Cited**

UNITED STATES PATENTS

1,761,450	6/1930	McKechnie	134/74
1,934,250	11/1933	Wynne	198/131
2,984,334	5/1961	Dungfelder	198/131
3,088,473	5/1963	Rogge	134/152 X
3,090,478	5/1963	Stanley	198/131
3,226,074	12/1965	Coe	220/17 X
3,256,441	6/1966	Grasty	220/17 X
3,474,894	10/1969	Ciongwa	198/131

FOREIGN PATENTS OR APPLICATIONS

696,850	10/1940	Germany	198/131

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[57] **ABSTRACT**

A bottle washing machine basket having a plastics lining including rectangular metal boxes (1) into each of which there is driven a liner (5) of a plastics material provided with a nose (6); the diameter of the liner is slightly larger than the inside width of the compartment into which it is inserted so that a slight deformation is required to drive the liner home and the liner is automatically clamped (FIG. 1).

5 Claims, 4 Drawing Figures

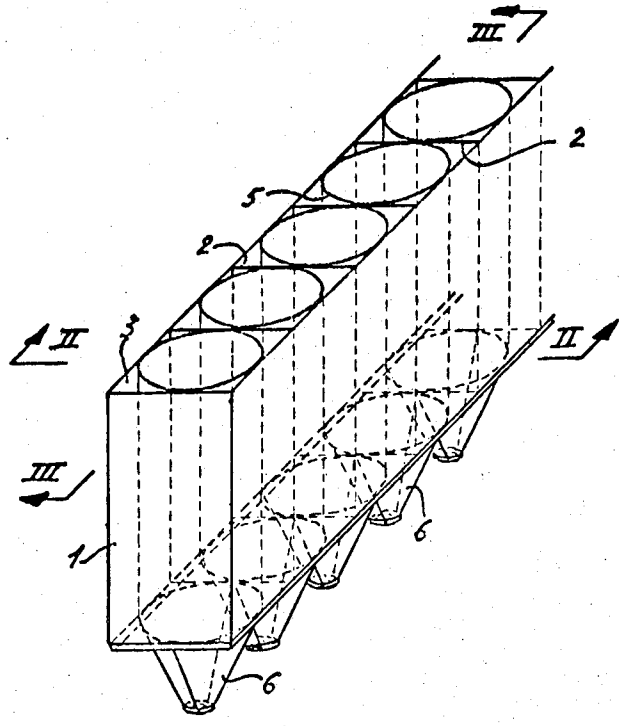


Fig. 1

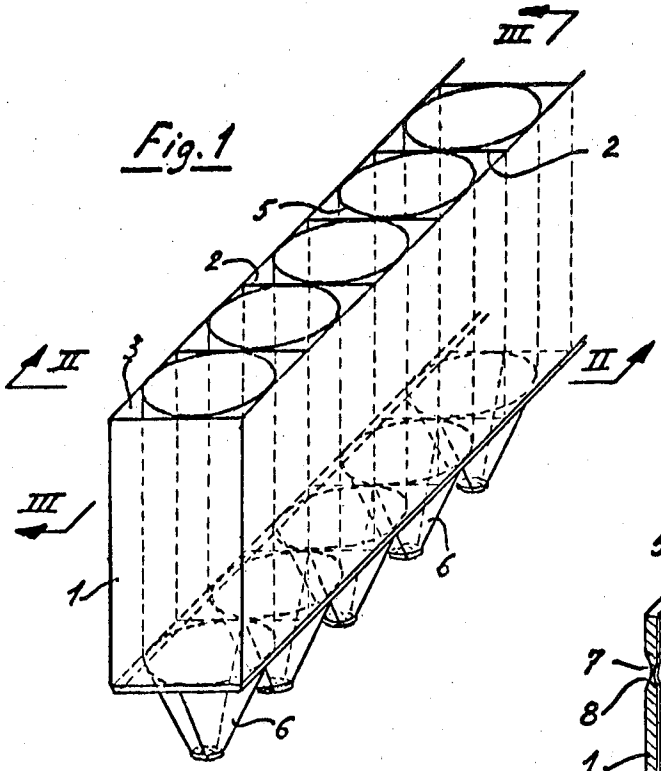


Fig. 4

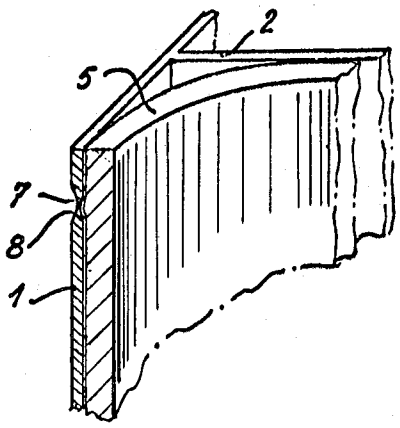


Fig. 2

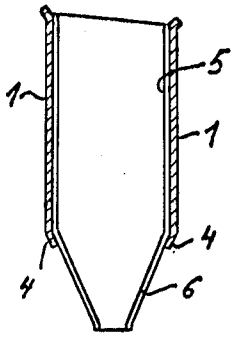
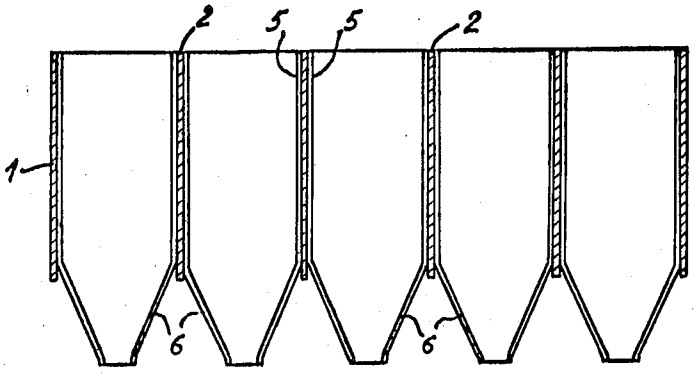


Fig. 3



BASKET FOR A BOTTLE WASHING MACHINE

This invention relates to a bottle washing machine basket which has a plastics lining, e.g. of polypropylene, to protect the bottle necks when they experience impacts due to striking of the end of the baskets.

Such baskets have been hitherto produced either by securing complete baskets of plastics material to beams or by securing plastic lugs in compartmented metal baskets.

The disadvantage of the first of these constructions is that the baskets are very fragile, for example if they encounter fragments of broken bottles. The disadvantage of the second system is that the legs do not hold sufficiently firmly in the end of the compartments.

According to the present invention, there is provided a bottle washing machine basket having a detachable plastics lining, such basket including a rectangular metal box having compartments into each of which there is driven a liner of a plastics material provided with a nose, the diameter of a liner being slightly larger than the inside width of the compartment into which it is inserted so that a slight deformation is required to drive the liner home and the liner is thereby clamped in the compartment.

Conveniently, parallel edges of the metal box are bent over slightly to form a conical configuration operative in centring the nose of a liner inserted in a compartment.

In order that the invention may be clearly understood, an embodiment thereof will be described in more detail, by way of example only, with reference to the accompanying drawing in which:

FIG. 1 is a perspective view showing a basket including a metal box provided with plastics liners in accordance with an embodiment of the invention;

FIG. 2 is a section on the line II—II in FIG. 1;

FIG. 3 is a section on the line III—III in FIG. 1; and

FIG. 4 is a fragmentary projective view of a plastic liner engaged with a wall of the box.

Referring to the drawings, a bottle washing machine basket includes an elongated rectangular metal box 1 which is open at the top and bottom and which contains partitions 2 dividing the box into compartments 3. The lower longitudinal edges of the box are bent over slightly towards one another to form conical edge portions 4 (see FIG. 2).

A cylindrical liner 5 of plastics material having a conical nose 6 is driven into each of the compartments 3 of the metal box 1. The neck of a bottle when inserted in the compartment may pass through the nose 6 or not depending on the circumstances.

The diameter of a liner 5 is slightly larger than the inside dimensions of a compartment, so that a slight deformation is necessary when the liner is driven home and the liner is thereby reliably clamped in the compartment.

To further assist retention of the liner 5 in the compartment, a triangular shaped projection 7 is formed on a portion of the outer surface of the liner 5 having its lower side sloping downwardly from the apex toward the liner with its upper side being substantially perpendicular to the longitudinal axis of the liner and extending from the apex toward the liner. The projection 7 adapted for engagement in a notch 8 formed in a wall

of the compartment 3 to assist in retaining the liner 5 therein.

A basket constructed as described above presents the following advantages;

1. Satisfactory rigidity of the complete basket constituted by assembly of a plurality of compartments, e.g. 12, it being possible for this number to be increased to 40 or 50 and more elements width-wise.

2. Very secure assembly of the plastics liners in the metal box and hence complete stability.

3. Easy replacement of any damaged liner at any time.

4. Effective centring of the nose of the plastics liner relatively to the compartment of the basket in which it is inserted.

What I claim is:

1. A bottle carrier comprising:

an elongated rectangular frame open at the top and bottom and having a pair of spaced longitudinally extending substantially parallel side walls;

a plurality of spaced transversely extending partitions mounted between the side walls dividing the frame into a series of longitudinally spaced compartments;

an elongated cylindrical plastic sleeve being forcibly inserted into each compartment, each sleeve being open at the top and bottom, the outer diameter of each sleeve being slightly larger than the inner width of the compartment into which it is inserted so that a slight deformation occurs thereby fixedly clamping the sleeve in the compartment, the bottom end of each sleeve tapering downwardly and inwardly to define an inverted conical end surface for receiving the top end portion of a bottle therein, each sleeve being of a length such that the bottom end extends downwardly from its compartment to a position beneath the bottom longitudinal edges of the sidewalls of the frame and

the bottom longitudinal edges of the frame sidewalls being bent inwardly towards one another at an acute angle so as to engage a portion of the outer surface of the conical end of the sleeve inserted in the compartment in a manner to position each sleeve in the compartment in which it is inserted.

2. The bottle carrier as set forth in claim **1** further characterized by

each compartment having a recess formed in one of the sidewalls thereof; and

each sleeve having an outwardly extending projection provided on its outer periphery and radially extending therefrom, the projection adapted for positive engagement in the sidewall recess for positioning and retaining the sleeve in the compartment into which it is inserted.

3. The bottle carrier as set forth in claim **2** wherein the projection is V-shaped having a flat substantially horizontal upper surface for engagement with the top edge of the sidewall recess, and the lower surface of the projection being tapered downwardly from the apex of the projection to the outer periphery of the sleeve.

4. The bottle carrier as set forth in claim **1** further characterized by

each compartment having a recess formed in one of the sidewalls thereof; and

each sleeve having an outwardly extending projection provided on its outer periphery and radially extending therefrom, the projection adapted for

positive engagement in the sidewall recess for positioning and retaining the sleeve in the compartment into which it is inserted.

5. The bottle carrier as set forth in claim **4** wherein the projection is V-shaped having a flat substantially horizontal upper surface for engagement with the top edge of the sidewall recess, and the lower surface of the projection being tapered downwardly from the apex of the projection to the outer periphery of the sleeve.

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