Oct. 20, 1959 P. C. HARTMAN 2,908,985

CONTAINER HAVING AN INTEGRAL CARD HOLDING STRUCTURE

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FIG. 1.

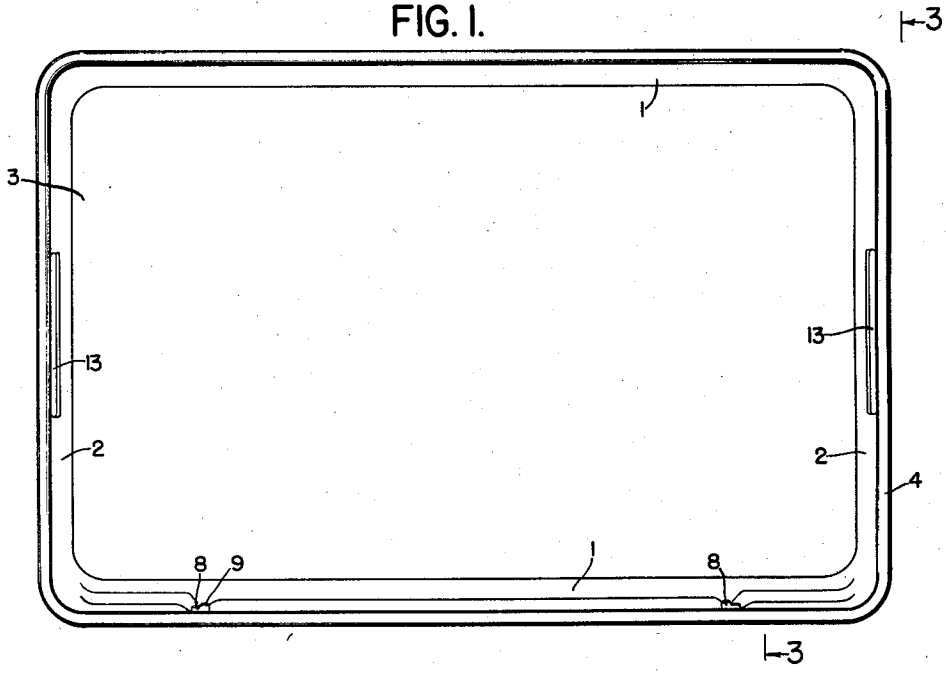


FIG. 2.

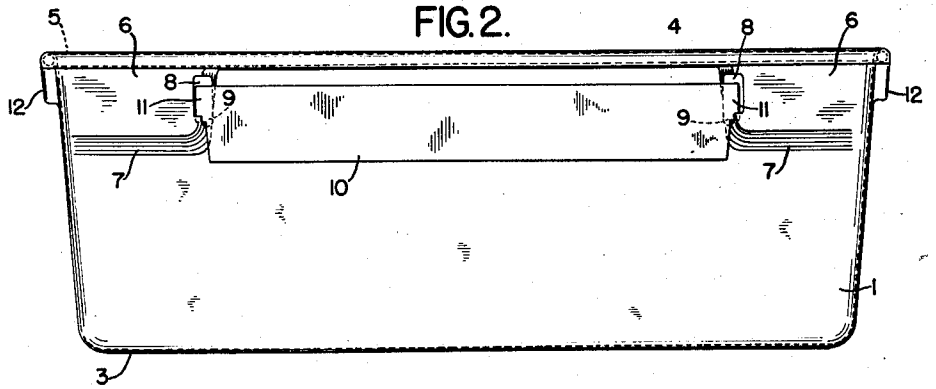
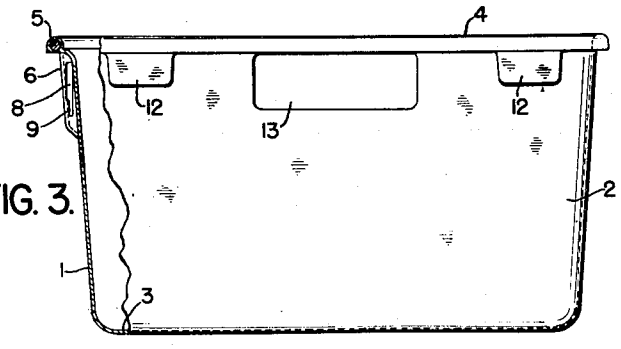


FIG. 3.



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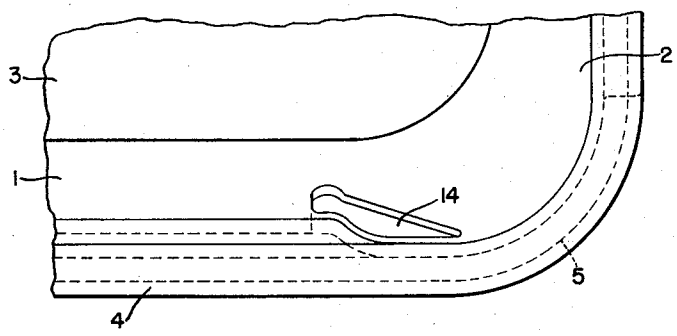

FIG. 5.

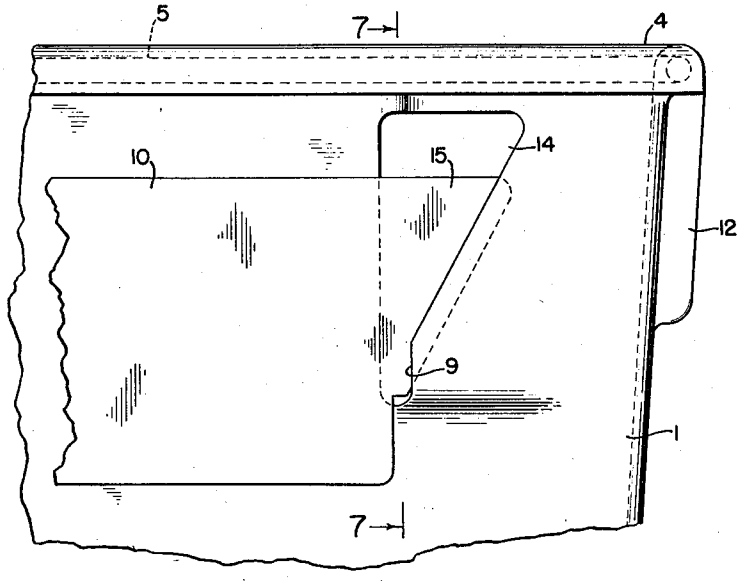

FIG. 6.

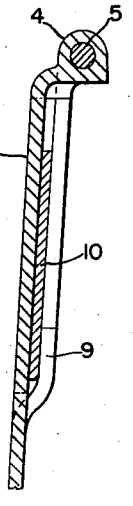

FIG. 7.

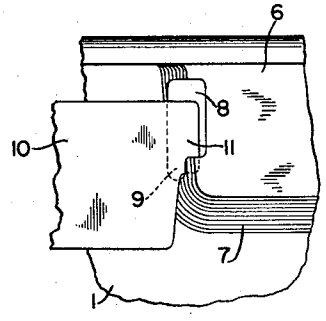

FIG. 4.

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CONTAINER HAVING AN INTEGRAL CARD HOLDING STRUCTURE

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Application November 14, 1958, Serial No. 773,936

5 Claims. (Cl. 40—2)

This invention relates to a container and more particularly to a container having an integral card holding structure.

Automatic conveyor systems are frequently employed to route containers or tote boxes containing component parts, parcels or the like. To route the container, a card is attached to the container and contains magnetic particles, color indicators, punched holes or the like, which will actuate an electronic mechanism. The electronic mechanism will automatically select and route the container to the location of use or discharge.

Containers having an attached routing card can also be employed in a manual system in which the cards are provided with printed instructions for dispatching or routing.

The present invention is directed to a molded container having an integral card holding structure. The container is generally rectangular in shape and the upper edge of the container is formed with an outwardly extending flange or rim. One of the walls of the container is provided with a pair of raised surfaces, and a recess or opening is formed in each of the raised surfaces.

The ends of the signal card to be attached to the container are provided with ears or projections having a shape to generally complement the openings formed in the raised surfaces of the container. The card is placed flat against the wall of the container with the ears positioned within the openings. By dropping the card vertically, the ears catch within notches located below the openings to hold the card firmly against the wall of the container.

With this construction, a substantial depth of locking engagement is provided between the card and the container wall to firmly hold the card against the wall and prevent accidental displacement.

Furthermore, the card can be readily attached to the container even though the container has a peripheral outwardly extending flange, because of the similar shape of the openings in the container wall and the ears on the card.

Other objects and advantages will appear in the course of the following description.

In the drawings:

Figure 1 is a top plan view of the container of the invention;

Fig. 2 is a side elevation of the container showing the signal card attached;

Fig. 3 is a view taken along line 3—3 of Fig. 1;

Fig. 4 is an enlarged fragmentary side elevation showing the attachment of the signal card to the container;

Fig. 5 is a fragmentary top plan view of a modified form of the container;

Fig. 6 is a fragmentary side elevation of the container shown in Fig. 4 and showing the signal card attached to the container; and

Fig. 7 is a sectional view taken along line 7—7 of Fig. 6 and with the card removed from the container.

The drawings illustrate a container or tote box which

is particularly adaptable for use on an automatic conveyor system. The container comprises a pair of side walls 1 and a pair of end walls 2 which are connected by a bottom wall 3. The upper extremities of the side walls 1 and end walls 2 are flared outwardly to provide a peripheral rim or flange 4 which extends around the entire container. The flange 4 is reinforced by a suitable wire 5 or other reinforcement to provide the upper edge with added stiffness.

One of the side walls 1 of the container is provided with a pair of offset surfaces 6 which are located in spaced relation to each other on the upper portion of the side wall beneath the flange 4. The surface 6 are offset outwardly from the side wall 1 and are connected to the side wall 1 by sloping surfaces 7.

A pair of openings 8 are provided in surfaces 6 and 7 and have a generally rectangular shape. A notch 9 or slot is formed in sloping surface 7 and communicates with the lower end of each opening 8.

A signal card 10 to be attached to the container is provided with a pair of outwardly extending ears 11 which are adapted to be received within the openings 8 in the side wall 1. The ears 11 have a generally rectangular shape and complement the openings 8 so that when the ears 11 are disposed within the corresponding openings, the body of the card 10 will be disposed flatwise against the side wall 1 of the container.

The card 10 is retained within the openings by engagement of the lower edge of the ears 11 with the respective notches 9. The card is placed flatwise against the side wall of the container with the ears 11 in alignment with the openings 8. By dropping the card vertically, the lower edge of the ears will engage the notches 9 to firmly attach the card to the container.

To remove the card, the card is merely raised vertically until the ears 11 are again in alignment with the openings 8 and the card may then be moved outwardly out of engagement with the container.

The containers are adapted to be nested with each other when not in use and the end walls 2 of the container are therefore provided with a pair of projections 12 which extend downwardly from the flange 4. In the nesting position, the lower edge of the projections 12 rests on the upper edge of the flange 4 of the next lower container to space the flanges 4 of the containers a distance equal to the depth of the projections 12. End holes 13 are also provided in the end walls 2 of the container to facilitate lifting the containers.

Figs. 5, 6, and 7 show a modified form of the invention in which the openings 14, corresponding to openings 8 of the first embodiment, are generally triangular in shape.

In this embodiment, the ears 15 on the signal card 10 are provided with a triangular shape conforming to the shape of the openings 14.

In a manner similar to that described with regard to the first embodiment, the card 10 is disposed flatwise against the side wall 1 with the ears 15 in alignment with the openings 14. By dropping the card vertically, the lower edges of the ears 15 engage the lower end of the notches 9 formed in surfaces 7 to firmly hold the card against the container.

While the above description is directed to a signal card being attached to our side wall of the container, it is contemplated that signal cards can be attached to two or more walls if desired. Similarly, a plurality of ears can be associated with each end of the signal card rather than a single ear. In this case, the side wall of the container would be formed with a plurality of openings corresponding to the number of ears on the end of the card.

The present invention provides a structure for holding a signal card against a container or tote box. The struc-

ture provides a substantial depth of locking engagement between the signal card and the container wall and permits the card to be readily attached to a container having a peripheral flange or other projection extending outwardly along the top edge of the container.

Various modes of carrying out the invention are contemplated as being within the scope of the following claims particularly pointing out and distinctly claiming the subject matter which is regarded as the invention.

I claim:

1. In a container adapted to be used in a conveying system, a wall, a pair of offset surfaces disposed in spaced relation and offset outwardly from said wall, a connecting surface connecting said wall and each of said offset surfaces, each of said offset surfaces having an opening in the edge portion thereof facing the other of said offset surfaces whereby a signal card is adapted to be placed flatwise against the wall with the ends of said card being disposed within said openings, and each of said connecting surfaces being provided with a slot communicating with the corresponding opening and extending downwardly from said opening whereby the lower edges of the ends of the card will engage the bottom of the respective slots when the card is dropped vertically to hold the card against the wall.

2. In a container adapted to be used in a conveying system, a wall, and a pair of raised surfaces connected to the wall and disposed in spaced relation, each of said raised surfaces having an opening therein adjacent the edge thereof and each of said raised surfaces having a notch communicating with said opening and extending downwardly from said opening, whereby a signal card having end projections can be attached to said wall, the end projections of said card being shaped to complement the shape of said openings whereby said card is disposed flatwise against the wall with the end projections being received within the corresponding openings and whereby the lower edges of said end projections engage the bottom of the respective notches when the card is dropped vertically to hold the card against the wall.

3. A container, comprising a plurality of side walls, a bottom wall connecting the lower ends of said side walls, a flange connected to the upper edge portion of each of said side walls and extending outwardly therefrom, a pair of offset surfaces disposed in spaced relation and located substantially immediately below said flange, and a connecting surface connecting said wall and each of said offset surfaces, each of said offset surfaces having an opening in the edge portion thereof facing the other of said offset surfaces whereby a signal card is adapted to be placed flatwise against the wall with the ends of said card being disposed within said openings, and each of said connecting surfaces being provided with a slot communicating with the corresponding opening and extending downwardly from said opening whereby the lower edges of the ends of the card will engage the bottom of the respective slots when the card is dropped vertically to hold the card against the wall.

4. In a container for use in a conveying system, a wall, an offset surface connected to said wall and extending outwardly therefrom, said offset surface being formed having an opening therein, the lower edge of the opening defining an upwardly facing, outwardly extending wall portion, whereby a signal card having an end projection shaped to be received within the opening is adapted to be attached to the container by engagement of said projection with the upwardly facing wall portion defined by said opening.

5. In a container, a wall, an offset member having a substantially vertical edge joined to the wall and having a surface extending from said vertical edge and offset laterally from the wall, said surface having an opening disposed adjacent said vertical edge to receive the end projection on a signal card when the card is disposed flatwise against the wall and said surface having a slot disposed adjacent said vertical edge and communicating with the opening and extending downwardly therefrom, said slot having a substantially smaller horizontal dimension than said opening whereby the lower edge of the end projection on the signal card will engage the bottom of the slot when the card is dropped vertically to thereby hold the card against the wall.

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