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RECEPTACLE AND CARRIER THEREFOR

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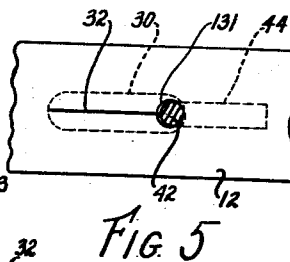
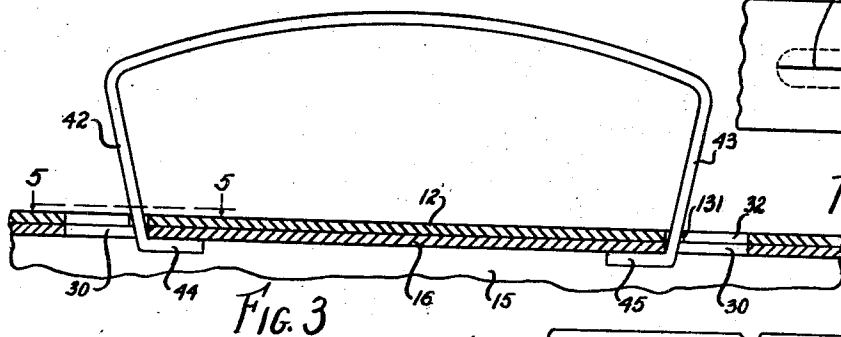
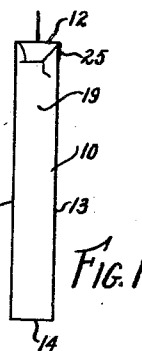
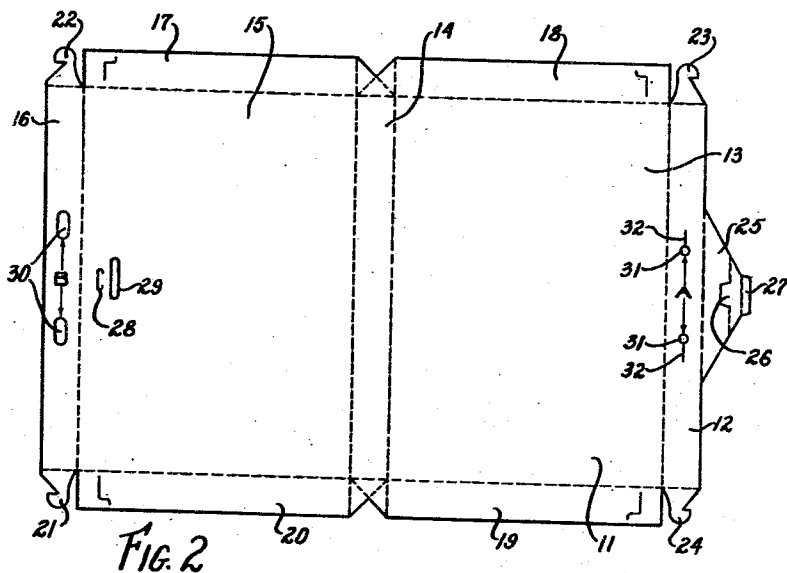
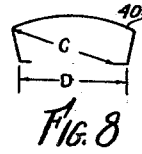
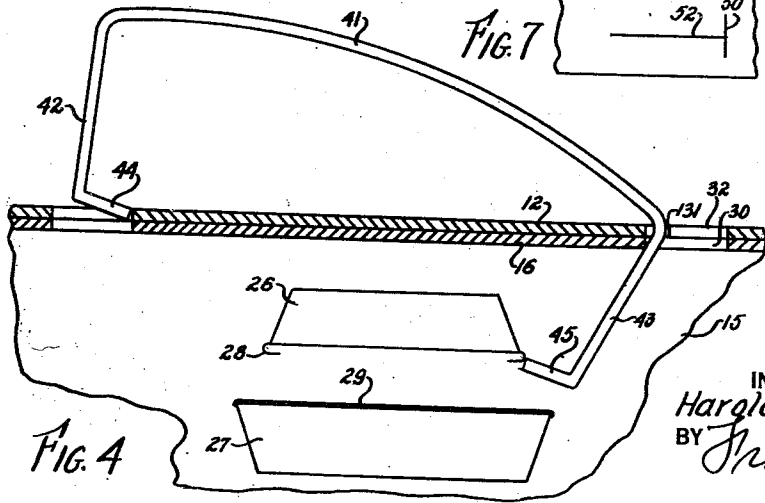
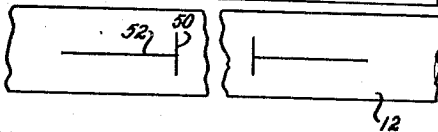


FIG. 6



FIG. 7



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RECEPTACLE AND CARRIER THEREFOR

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5 Claims. (Cl. 229—52)

This invention relates to receptacles or boxes provided with carriers or handles, and more particularly to an arrangement for attachment of handles to boxes and cartons fabricated from fibrous material such as cardboard and the like.

An object of the invention is to provide a method of constructing a cardboard box blank which may be folded to form a box, in conjunction with which a wire handle may be quickly and easily attached.

Another object is to provide a cardboard box of the kind wherein a handle may be fastened thereto after such a box has been filled with merchandise and closed, without necessitating the opening of such a box in order to affix a handle.

A further object of the invention is to produce a box blank which may be folded into a box to which may be affixed a handle, but which blank will be intact and whole in the event a handle is not affixed to the box made from said blank.

Still a further object of the invention is to provide a handle which may be attached to a complete box without necessitating the use of force or deformation of said handle.

These and other objects are attained in the following detailed description and shown in the accompanying drawing in which:

Fig. 1 is a side view of a box and handle made in accordance with the invention.

Fig. 2 is a plan view of a flat blank as formed for making a collapsible box embodying the invention.

Fig. 3 is a sectional, fragmental view showing a handle associated with a cardboard box.

Fig. 4 is a view similar to Figure 3 showing a handle being inserted through the handle openings of the box.

Fig. 5 is an enlarged view taken on line 5—5 of Fig. 3.

Fig. 6 is a modified form of a handle-receiving slit.

Fig. 7 is a second modified form of handle-receiving slit.

Fig. 8 is a side view, on a reduced scale, showing a handle made in accordance with the invention.

A box 10 is folded from flat blank 11, of suitable material, in which a top 12, front 13 and bottom 14 comprises what is hereinafter referred to as the outer or cover section: and rear wall 15 and inner top wall 16 comprise what is hereinafter referred to as the inner or base section. Suitable end walls 17, 18, 19 and 20 are engaged by locking tongue members 21, 22, 23 and 24 in a manner old in the art, whereby the inner and outer sections are completed, being hingedly connected together along the common bottom section 14.

The inner-section and outer-sections when associated to form a complete box, may be locked

in closed or engaging position or relationship by means of the flap lock strip 25, which is made integral with top 12. This lock flap comprises latching tabs 26 and 27 which cooperate with and fit within slit 28 and slot 29 respectively, provided in rear wall 15, substantially as shown in Calahan Patent No. 575,775.

In the top wall 12 a pair of push-out blanks are provided, each blank comprising a scored circle 31 having a scored line 32 extending outward from the edge thereof. These scored sections or blanks are so positioned that when the box sections are closed together as shown in Fig. 1, each scored blank falls directly over a complementary slot 33 provided in inner top wall 16.

It should be noted that the distance A between the inner adjacent edges of scored circles 31, is equal to the distance B between the inner adjacent edges of the pair of complementary slots 33.

A wire handle 40 having the following specifications is formed to cooperate with these handle-receiving means.

Handle 40 comprises a hand hold portion 41, sides or legs 42 and 43 each of which terminates in in-turned or convergent foot members or lugs 44 and 45 respectively. The distance between the closest portions of legs 42 and 43 is equal to the distance A and B between the adjacent edges of the scored circles 31 and slots 33 respectively. The handle is so formed that the distance C from the inner-most end of one foot to the inner corner formed where the opposite leg meets the hand portion 41 of handle 40 is equal to the lower horizontal distance D between the inner adjacent or closest edges or portions of legs 42 and 43.

The length of side legs 42 and 43 is such that hand grip portion 41 of the handle will be a sufficient distance above the box top 12 as to provide ample room to accommodate the hand of a person using such handle without touching said box top 12.

When it is desired to affix a handle 40 to a completed and closed box 10, the handle is grasped in one hand, and one foot or lug say 45, is forced through a push-out circle and associated slit whereby foot 45 is free to pass through the adjacent complementary slot 33, thence into the interior of the box 10. Since the distance D between legs 42 and 43 equals distance A between the inner-most edges of a pair of push-out circles 31, it is obvious that in order to introduce (without distorting) the second inturned foot 44 through the second of the push-out circles constituting the pair, that legs 43 must be inserted into the interior of box 10 until the corner where leg 43 and hand hold portion 41 intersect is seated within the opening formed by the push-out circle first displaced, as shown in Fig. 4. Foot 44 is now properly positioned over the sec-

and push-out circle so that by forcing leg 42 downward foot 44 will easily displace said push-out circle and pass through associated slot 30 into the box interior. By pulling up on handle section 41 the handle will seat, as shown in Fig. 3, with the entire length of inturned foot portions 44 and 45 being supported by a double thickness (12 and 16) of box material.

The overall length of each scored line 32 is at least equal to the length of a foot member 44 and 45, whereby the overall length of each scored push-out circle and associated scored line is greater than the length of such foot member. In this manner the stock from which a box is fabricated will not be torn or opened up beyond the length of such a scored line 32 when a handle and associated foot is inserted, since a sufficient length of material is scored to properly accommodate the displacement caused by such foot member.

As clearly shown in Fig. 5, the diameter of hole 131 resulting when the scored push-out circle 31 was removed, is slightly larger than the diameter of handle leg 42. This is done in order that leg 42 will be positively held in proper juxtaposition within the circumference of hole 131, yet at the same time be capable of free vertical movement without becoming disengaged from its associated opening 131. Such a semi-loose fit also prevents the handle from binding within its opening.

The handle may be removed by reversing the process of insertion.

A decided advantage of this type box and associated handle lies in the ease with which such a handle may be secured to a box and the security with which it holds the box. A further advantage is in the flexibility afforded by such a box which may also be used without handle, in which event the scored lines are not punched out whereby the outersection of the box remains intact and whole.

As shown in Figs. 6 and 7 are two modified forms of handle-receiving scored slits. The one (Fig. 6) an H slit section, comprises short parallel scored lines 50 and 51 connected by a longer scored slit 52 through which a foot member may be passed. An alternate form (Fig. 7) shows a T section, which is the same as the H section except that the outermost short scored lines are omitted.

It should be understood that the handle herein described may be also used on the so called two-piece boxes in which event two sets of locking flaps would be used to properly fasten the two box sections in proper alignment. An alternate method of fastening a two-piece box would be to fasten the lower side of such a box by means of gummed tape and then use a handle to fasten the upper edges together.

What is claimed is:

1. The combination with a cardboard box comprising an outer section and an inner section hingedly connected along a common edge, said inner section adapted to be received within the outer section, fastening means provided through the top wall of the inner and outer sections for supporting a handle from said top walls, of a bent wire handle comprising a hand portion, and side legs which terminate in inturned foot members, said handle having such characteristics whereby the horizontal distance adjacent the foot members between two legs comprising a pair

equals the horizontal distance between the adjacent edges of the fastening means comprising a pair, which is also equal to the distance between the innermost tip of a foot member and the juncture of the leg supporting the second inturned foot member and the handle portion, said handle being adapted to be inserted through the handle-receiving means whereby the inturned feet will be supported by a double thickness of the cardboard stock.

2. A box of fibrous material including a main box portion and a cover receivable thereon, and handle-receiving means in the form of a pair of scored, push-out circles having scored lines extending diametrically therefrom and from each other provided in the cover portion, a pair of elongated slot members provided through the box portion being so aligned as to fall directly beneath the scored holding means of the cover portion, and an inverted U-shaped handle having its leg members passed through said handle-receiving means from the exterior of the box and having convergent extremities adapted to engage the box wall intermediate the handle-holding means comprising a pair.

3. A box handle comprising an arcuate hand grip portion bounded by converging side legs each of which terminates in converging foot members, said handle members having such proportions whereby the horizontal distance between the side legs adjacent the foot members is substantially equal to the linear distance from the innermost end of a convergent foot member to the intersection defined by the juncture of the hand grip portion with the other side leg which terminates in the second convergent foot member.

4. A handle of the class described for detachable mounting on a receptacle having a pair of spaced apertures in a wall thereof, said handle comprising a unitary metallic rod bent upon itself to form a central hand hold portion, a pair of converging leg portions extending from opposite ends of the hand hold portion and substantially aligned spaced lugs, extending toward one another from the ends of the legs, the junction of each leg and the hand hold portion being spaced from the free end of the lug of the opposite leg a distance approximating the spacing between the apertures of the receptacle to which said handle may be attached.

5. The combination with a receptacle comprising a wall having a pair of spaced apertures therein, of a handle comprising a unitary metallic rod bent upon itself to form a central hand hold portion, a pair of converging leg portions extending from opposite ends of the hand hold portion and substantially aligned spaced lugs, extending toward one another from the ends of the legs, the junction of each leg and the hand hold portion being spaced from the free end of the lug of the opposite leg a distance approximating the spacing between the spaced apertures in the receptacle wall, whereby said handle and receptacle may be attached and detached by successively moving each of the lugs of the handle through an aperture and incident to which one of the legs of the handle is moved to such position relative to the receptacle, that the junction of such leg and the hand hold portion of the handle is disposed at one of said apertures.

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