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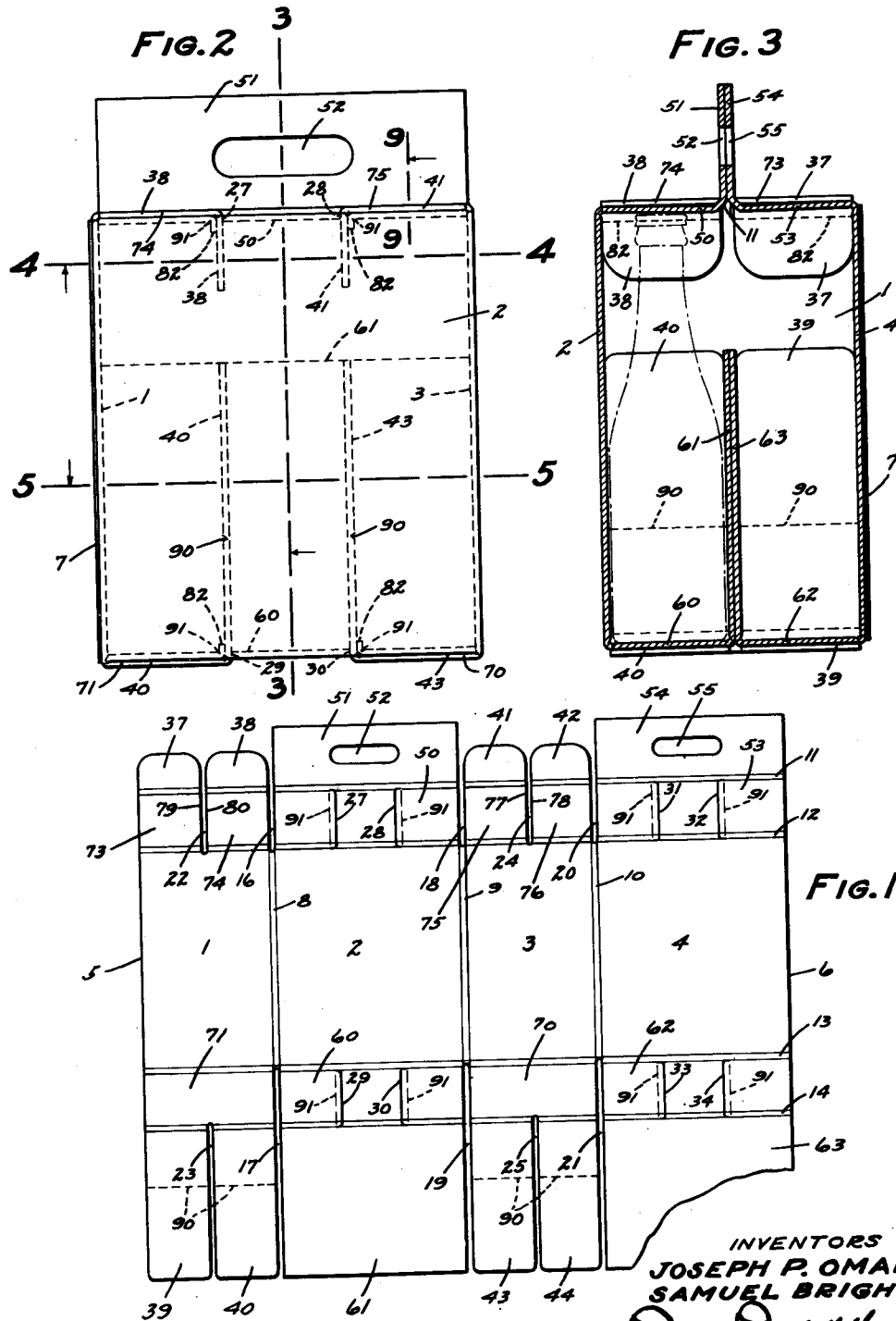
J. P. OMAN ET AL

1,881,900

RECEPTACLE

Filed July 20, 1931

2 Sheets-Sheet 1



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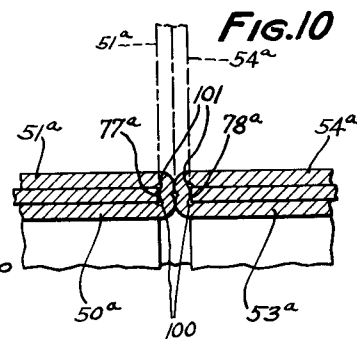
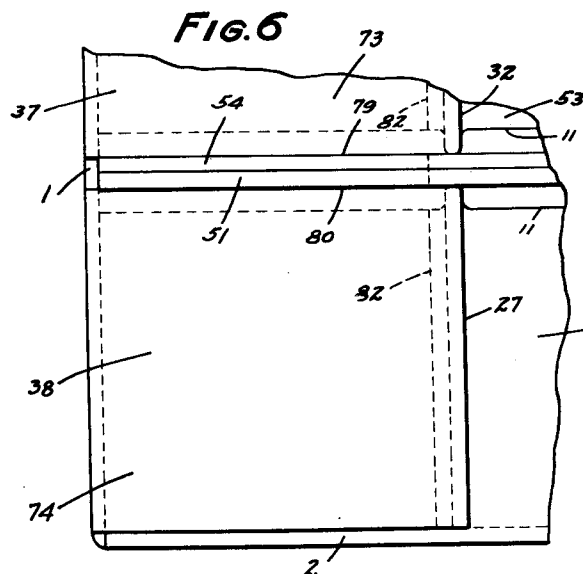
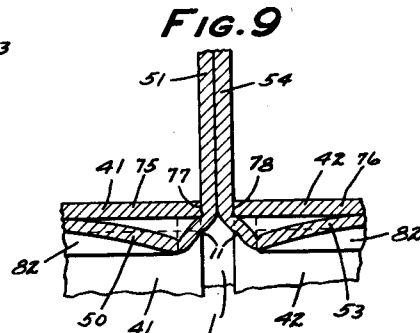
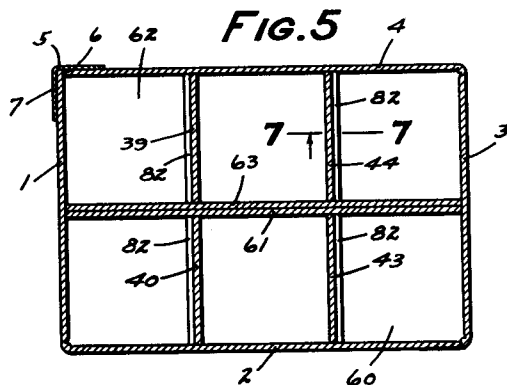
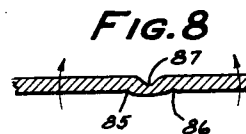
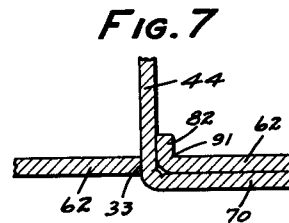
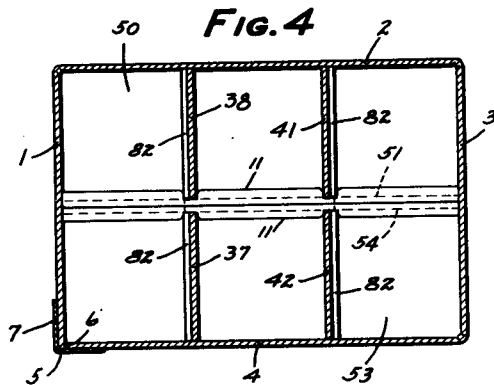
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RECEPTACLE

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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RECEPTACLE

Application filed July 20, 1931. Serial No. 551,950.

This invention relates to production from a single piece of material, of a container having a plurality of compartments each adapted, for example, to contain a bottle.

5 Features of the invention include the manner of forming means for closing the end of the container, and for forming a carrying handle or a partition for the container after the closure means is in closure position; the
10 provision of combined locking and partition-forming elements; the alignment of those locking elements which extend from opposite ends of the device to form coplanar walls of the various compartments; to provide a sym-
15 metrical arrangement of the compartments with respect to the carrying handle; and all details of construction shown and described.

Another feature relates to the provision of a blank adapted to be folded to form a con-
20 tainer, and to provide portions which cooperate to form closures at opposite ends of the container, which portions have extensions respectively adapted to partition the container and to provide a carrying handle therefor.

25 Objects, features and advantages of the invention will be set forth in the description of the drawings forming a part of this application, and in said drawings

30 Figure 1 is an outside face view of the blank;

Figure 2 is a side view of a container formed from the blank;

Figure 3 is a central vertical transverse section on line 3—3 of Figure 1;

35 Figure 4 is a plan section on line 4—4 of Figure 2 looking upwardly;

Figure 5 is a plan section on line 5—5 of Figure 2 looking downwardly;

40 Figure 6 is a fragmentary top plan of Figure 2;

Figure 7 is a detail section on line 7—7 of Figure 5 illustrating the locking action of tongue element and slot;

45 Figure 8 is a detail section illustrating the manner of forming the bend line portions of the blank;

Figure 9 is a somewhat diagrammatic detail section on line 9—9 of Figure 2, showing how the sides of the tongue elements engage
50 and brace the handle-forming portions; and

Figure 10 is a section, similar to Figure 9, illustrating a modification.

In the drawings, there has been illustrated an embodiment of this invention particularly adapted for carrying a plurality of bottles, and adapted to form a partitioned container
55 having a separate compartment for each bottle, to the end that the bottles cannot possibly come in contact with one another, and said embodiment providing a reinforced han-
60 dle structure so arranged as to facilitate the maintenance of the bottles in upright position when being carried.

The device is formed from a substantially rectangular blank which is punched or cut to define or provide some of the structural elements, and is pressed or creased to facilitate bending of the material and to define or provide other structural elements or por-
65 tions. The punching operations provide a parallel series of slots which extend inwardly from the periphery of each of two opposite sides of the blank. These slots define closure and handle-forming portions and terminal tongue-like elements, and the punching
70 also defines certain panel sections and provides additional slots which are adapted to be traversed by certain of the tongues, the slots and tongues being formed and proportioned so as to act as frictional locks for se-
80 curing the various elements in operative position.

Figure 1 is an outer face view of the blank. Four panel elements, 1, 2, 3 and 4 are part-
85 ially defined by parallel pressed fold lines 8, 9, 10, and this definition is completed by punching the blank to provide parallel series of slots, a series at each of two opposite sides or ends of the panels. These slots are also par-
90 allel to the bend lines 8, 9, 10. Two of the slots 16, 17 are colinear with the bend line 8; two slots 18, 19 are colinear with bend line 9; and two slots 20, 21 are colinear with bend
95 line 10. Bend lines 11—12 are perpendicular to and substantially intersect all of these inwardly extending slots at one end of the panels, and bend lines 13—14 similarly in-
100 tersect all inwardly extending slots at the opposite ends of the panels.

Panel 1 is slotted at opposite ends respec-

tively at 22—23 and panel 3 is slotted respectively at opposite ends as at 24—25. It will be noted that the slots 23 and 25 extend only to the outer bend line 14, while the other slots at this end extend to inner bend line 13. All the slots at the opposite end of the blank extend to the inner bend line 12.

At opposite ends of panel 2 and disposed respectively between bend lines 11 and 12 and bend lines 13 and 14, are pairs of slots, the members of which are respectively designated 27—28 and 29—30. Similarly placed at opposite ends of the panel 4 are similar slots, the members of which are respectively designated 31—32 and 33—34. All pairs of slots are parallel with the inwardly extending slots.

Slots 22 and 16 define tongue elements 37—38 and slots 23 and 17 define tongue elements 39—40. Slots 18—20 and 24 define tongue elements 41—42; and slots 19, 21 and 25 define tongue elements 43—44. There is, therefore, provided a tongue element for each of the slots 27 to 34, inclusive.

At one end of the panel 2 there are provided a closure portion 50 and a handle-forming portion 51, slotted as at 52 to provide a hand-hold. The slots 27 and 28 are formed in the closure portion 50. The panel 4 is provided at one end with the closure portion 53, and with the handle-forming portion 54 slotted as at 55. The slots 31 and 32 are formed in the closure portion 53, and the portions 50 and 53 cooperate, when the blank is properly folded, to form a closure, see Figure 3, for the top of the container, and after these parts 50—53 are in closure position, the parts 51—54 are disposed to form a two-ply, medially-disposed handle, with the slots 52 and 55 in register to form an opening for the hand. The handle extends the full length of the top.

Panel 2 is provided at the opposite end with a closure portion 60, and a partition-forming portion 61. The slots 29—30 are formed in the closure portion 60. The panel 4 is provided with a closure portion 62, and with a partition-forming portion 63. The slots 33—34 are formed in the closure portion 62. The portions 60—62 cooperate to close the bottom of the receptacle (see Figure 3) and when elements 60—62 are in closure position, the parts 61—63 extend within the receptacle flatly against one another and together act as a two-ply medially-disposed partition, dividing the box into two elongated compartments. The elements 61—63 extend in the same direction as the handle elements 51—54.

Folding operation

In folding the blank, the edges 5 and 6 are first brought together, and secured by tape 7, the folding motion being made in a direction away from the observer when viewing the

blank as shown in Figure 1. The elements 60—61 and 62—63 are then folded inwardly along the lines 13 and 14 to bring the partitioning elements 61 and 63 to the position shown in Figure 3, and the closure elements 60 and 62 to the position shown in that figure. Tongues 43—44 are then inserted respectively in slots 30—33 as best shown in Figure 2. The folds are along the lines 13 and 14, and it will be noted that when the parts have been folded inwardly as mentioned and as shown in Figure 2, portion 70 engages flatly against closure portions 60—62 to reinforce the same, giving a two-ply structure, in the zone of overlap. The tongues 39—40 are then inserted respectively in slots 34 and 29 to assume the position shown in Figure 2, and thus the bottom for the receptacle is formed, and the tongues 39—44 are arranged at one side of the partitioning elements 61—63, while the tongues 43 and 40 lie at the opposite side of these elements. The portion 71 acts as a reinforcement in the same manner as portion 70. This arrangement is best shown in Figure 5 and it will be noted that a series of compartments is thus defined, at each side of the elongated partition-forming elements 61—63, in this case six compartments, symmetrically arranged.

It will be noted that the tongues 43—44, 39—40, when in partition-forming position are substantially the same height as the partition-formers 61—63.

After the bottles have been placed in their respective compartments formed by folding the bottom elements as previously described, the elements 50—53 are moved to closure position as shown in Figure 3, and the handle-forming elements 51—54 are brought to the position shown. Tongues 37—38 are now respectively inserted in slots 32—27 to assume the positions shown in Figures 2 and 3, and then the tongues 41—42 are inserted respectively in slots 31—28. By inspection of Figure 2, it will be noted that the tongues provide reinforcing portions 73—74—75—76 which engage portions of closure elements 50—53 to form a two-ply structure. It will be further noted that the tongues 37, 38, 41 and 42, after placement within the box, are disposed in co-planar relation with the corresponding compartment-defining and locking tongues of the bottom, so that six bottle-holding compartments are defined, which extend from top to bottom of the container; see Figure 3 in which the position of the bottle is shown in dot-and-dash lines.

Referring to Figures 3, 6 and 9, it will be noted that the inner edges 77, 78 of tongues 41, 42 and corresponding edges 79, 80 of the tongues 37, 38, about the handle-forming portions at bend line 11 to stiffen the structure.

It will be further noted by inspection of Figure 7, that the tongues and slots form locks to secure the parts in operative position.

The slots 27 to 34, inclusive, are each formed by cutting, to provide a flap 82 which is forced to the position shown in Figure 7 when the tongue is introduced, and which acts by its resiliency to apply a friction pressure which secures the tongue and quite forcefully resists its withdrawal.

Referring to Figure 8, the stock is punched on the outer side along lines 8, 9, 10, 11, 12, 13 and 14 as shown at 85—86, and is formed as shown at 87 on the inner side, to facilitate bending in the direction of the arrow.

Each of the tongues 39, 40, 43 and 44 have punched bend lines 90 on the inside face of the blank, to allow for bending to facilitate introduction of these longer elements into the corresponding slots. The same character of punching for bending is made for the flaps 82 of the slots. These crease lines are indicated by dotted lines at 91 and are on the same side with the punchings 90, that is on the inner side.

It is sometimes desirable to have the elements 51—54 (51^a—54^a) fold downwardly from the position shown in Figure 9 to the position shown in Figure 10, so that one carton may be placed flatly one on top of another in a larger cover-carton, for shipment. To this end, the elements 50^a—53^a are made slightly longer in a cross-wise direction so that the bend lines 100 lie at the edges 77^a—78^a, and so that the bend lines 101 lie above or at a position coplanar with the upper surfaces of elements 50^a—53^a so that the handle-forming elements 51^a—54^a can be bent outwardly from the handle-forming position shown in dot-and-dash lines and away from one another to assume the position shown in full lines, in engagement with the outer surfaces of elements 50^a—53^a. This modification is a valuable feature of the invention.

We claim as our invention:

1. A device of the class described comprising a blank adapted to be folded to form a container, and having elements at one end, having portions adapted to cooperate to form a closure for that end and having other portions adapted to partition the container when the closure portions are in closure position, said closure portions having slots, and said end having other elements one for each slot adapted to traverse the corresponding slot, and additionally partition the container, the opposite end of the container also having elements having portions adapted to cooperate to form a closure for the container and having other portions which are adapted to be folded outwardly to cooperate to form a two-ply handle for the container when the closure portions are in closure position, said closure portions having slots, and said end having other elements one for each slot adapted to traverse the corresponding slot, and assume a coplanar relation with corresponding slot-

traversing elements of the opposite end to define a series of compartments.

2. A device of the class described comprising a blank adapted to be folded to form a container, and having at each of two opposite ends, elements having portions adapted to cooperate to form a closure for the container, said elements at one end having other portions adapted to partition the container when the closure portions are in closure position, and the elements at the other end having portions adapted to form a handle extension for the container when the closure portions are in closure position, the closure portions at each end of the container having locking slots, and each end of the container having other elements one for each slot adapted to frictionally traverse the corresponding slot, the corresponding slot-traversing portions of opposite ends of the container being adapted to assume a coplanar relation to form a series of compartments at each side of the first mentioned partitioning portions.

In witness whereof we have set our hands this 1st day of July, 1931.

JOSEPH P. OMAN.
SAMUEL BRIGHT.