March 16, 1954 W. B. CRANE 2,672,274

CONTAINER

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Fig-1

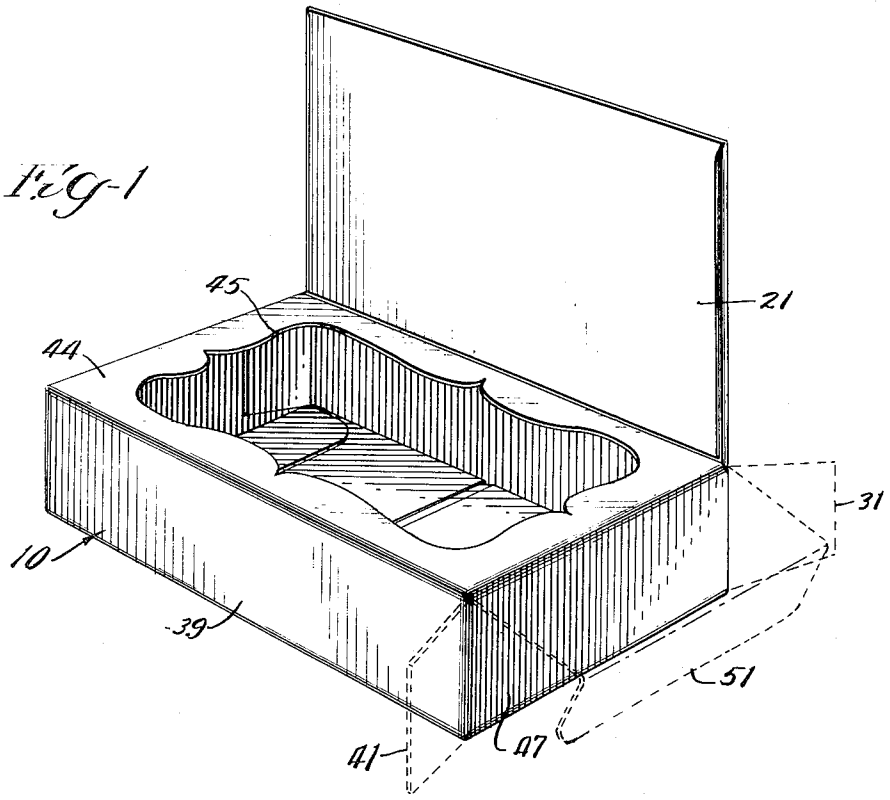
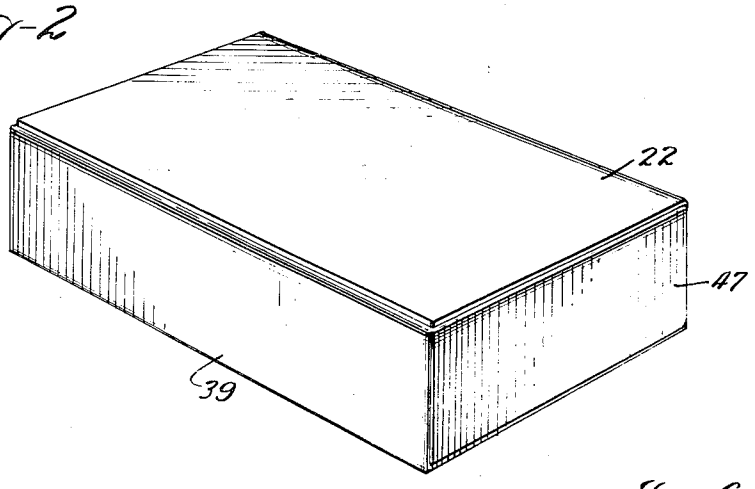


Fig-2



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Fig-3

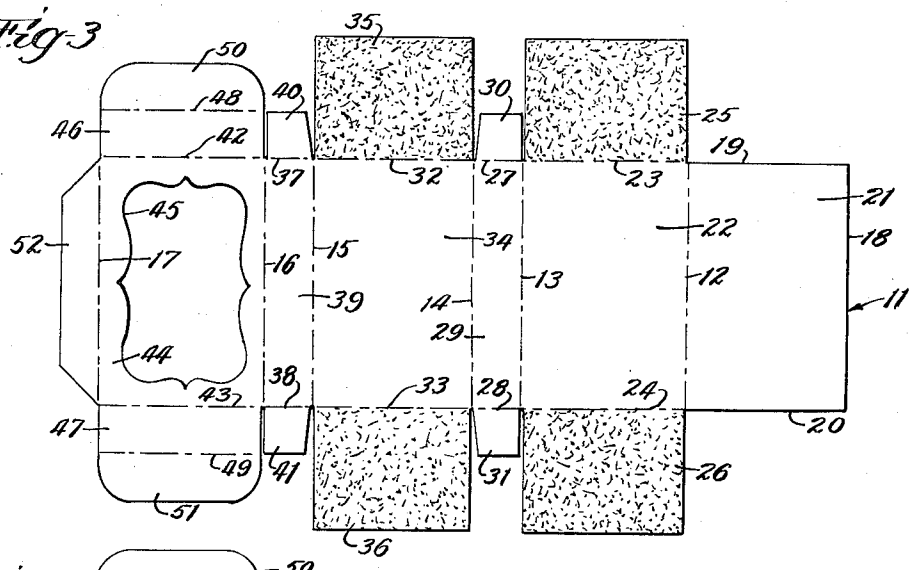


Fig-4

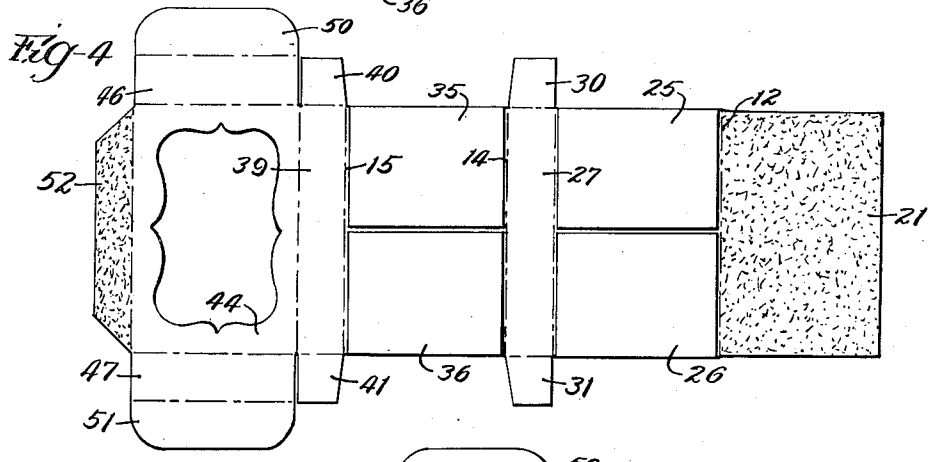
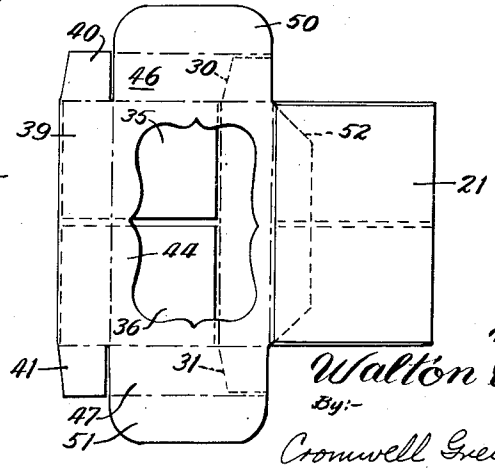


Fig-5



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UNITED STATES PATENT OFFICE

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CONTAINER

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2 Claims. (Cl. 229—37)

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This invention relates to containers and is more particularly concerned with a collapsible container which is constructed from a one-piece foldable blank of paperboard or similar material and which when erected has the appearance of a non-collapsible rigid set up container.

It is an object of the invention to provide a container of generally rectangular form having the appearance of a rigid set up container but which may be economically fabricated from a single sheet of paperboard or similar material and furnished to the user in collapsed condition.

It is a further object of the invention to provide a paperboard container which is formed from a single sheet of relatively flexible material, cut and scored to provide imperforated bottom wall, side wall and cover panels, in combination with a perforated top wall panel and foldable end wall panels, wherein the cover panel comprises three thicknesses of material which is folded to give it the finished appearance of a solid board.

It is another object of the invention to provide a collapsible carton formed from a single blank of paperboard material which is cut and creased to provide a series of connected panels, including imperforate bottom and side wall forming panels, a perforated top wall forming panel, an imperforate cover forming panel, integral end wall forming panels and foldable bottom and cover panel reinforcing members, the panels being arranged so that glue may be applied and certain of the panels may be folded on standard gluing and folding machines.

These and other objects of the invention will be apparent from the consideration of the preferred form thereof which is shown by way of illustration in the accompanying drawings, wherein:

Fig. 1 is a perspective view of a container embodying the principles of the invention, in completely set-up condition with the cover member in open position;

Fig. 2 is a perspective view of the container in completely set-up condition with the cover member in closed position;

Fig. 3 is a plan view of a paperboard blank cut and scored to provide the container;

Fig. 4 is a plan view similar to Fig. 3 with portions of the blank in folded condition showing the first step in the folding operation; and

Fig. 5 is a plan view of the completed container in flat folded condition.

Referring to the drawings, there is illustrated a container 10 which incorporates therein the principles of the invention. The container 10 is fabricated from a blank 11 (Fig. 3) of paperboard or similar material which is preferably covered, on the outer side with a decorative sheet material such as metal foil.

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The blank 11 is generally rectangular in form and comprises a central portion divided into panels by a plurality of parallel transversely extending longitudinally spaced score lines 12, 13, 14, 15, 16 and 17, which score lines are of a length equal to the length of the container. The score line 12 which is spaced from the end edge of the blank 11 a distance approximately equal to the width of the finished container defines with the longitudinally extending side edges 19 and 20 an inner cover forming panel 21. A second, or outer cover forming panel 22, is defined by score lines 12 and 13 which are also longitudinally spaced a distance equal to approximately the width of the finished container and the laterally spaced longitudinally extending score lines 23 and 24 which are in longitudinal alignment with end edges 19 and 20 of the cover forming panel 21. Panels 25 and 26 which are generally rectangular in shape and each approximately half the area of the cover panels 21 and 22 extend outwardly of the score lines 23 and 24 and are adapted to fold about the same into face-to-face relation with the cover forming panel 22.

Transverse score lines 13 and 14 are longitudinally spaced the depth of the container and define with the score lines 27 and 28 the side forming panel 29. Relatively short end flaps 30 and 31 extend laterally beyond the score lines 27 and 28.

Transverse score lines 14 and 15 define with score lines 32 and 33 a bottom forming panel 34. End panels 35 and 36 project laterally beyond the score lines 32, 33 and are foldable about the latter into face-to-face relation with the bottom panel 34.

Transverse score lines 15 and 16 define with score lines 37 and 38 front wall forming panel 39. Short end flaps 40 and 41 extend laterally beyond the score lines 37 and 38.

Transverse score lines 16 and 17 define with the score lines 42 and 43 a top forming panel 44 which is apertured at 45. End forming panels 46 and 47 project laterally beyond the score lines 42 and 43 and extend to the score lines 48 and 49 which separate the same from folding tongues 50 and 51 extending beyond the same.

A relatively narrow transversely extending connecting tongue 52 is separated from the top panel 44 by the score line 17 at the end of the blank.

The blank 11 when cut and scored as described

(Fig. 3) is passed through the first stage of the gluing and folding machine where glue is provided on the laterally extending end panels 25, 26 and 35, 36. These panels are then folded over upon the cover panel 22 and the bottom panel 34, respectively (Fig. 4), the end panels being folded about the lines 23, 24 and 32, 33.

The partially folded blank is then passed through the second stage of the gluing and folding machine where glue is applied to the cover forming panel 21 and connecting tongue 52, after which the blank is folded about the crease line 15 to bring the glue covered face of the connecting tongue 52 into overlapping relation on the folded end panels 25 and 26. Thereafter the cover panel 21 is folded about fold line 12 to bring the glue covered face into covering relation with the tongue 52 and the end panels 25, 26 completing the container in flat folded condition as shown in Fig. 5. In this condition the container is furnished to the user.

In order to erect the container 10 the side wall forming panels 27 and 39 are swung about score lines 14 and 15 to bring them into upstanding relation to the bottom panel 34. The end flaps 30, 31 and 40, 41 are swung inwardly about the score lines 27, 28 and 37, 38 after which the end forming panels 46 and 47 are folded downwardly about the score lines 42, 43 and the tongues 50 and 51 folded about the score lines 48 and 49 to position the latter in locking relation within the container. The cover for the container which is formed by the folded over panels 21 and 22 is adapted to be swung about the score line 13 into flat relation on the top of the container.

In the completely erected and closed condition the container very closely simulates the appearance of a rigid permanently erected box or carton. When a material is used having a decorative outer surface, such as a metal foil, the appearance of the finished container is enhanced and simulates that of a rigid container of similar size which has been covered with a decorative material.

The blank from which the container is formed is cut with a minimum of waste and the arrangement of the panels is such that the blank may be supplied with glue and folded into the collapsed condition on standard gluing and folding equipment. The finished container has the

pleasing appearance of a rigid covered container while at the same time being economical to produce and permitting substantial saving in shipping the empty containers.

I claim:

1. A collapsible container formed from a one-piece blank of relatively stiff foldable material, said container comprising connected bottom, side, end and top cover forming members, said bottom and cover forming members including integral reinforcing end flaps, each of said flaps being of an area approximately half the area of said bottom and cover forming members, and said end flaps being foldable upon and secured in face-to-face relation with said bottom and cover forming members.

2. A collapsible container formed from a one-piece paperboard blank which is cut and scored to provide a plurality of connected panels, said panels being foldable to form container wall and cover members, said container comprising in the erected condition, a bottom wall, side walls, end walls and a hinged top cover member, said cover member including integral inner and outer panels of substantially the same area and reinforcing panels integral with one of said inner and outer panels, said reinforcing panels each being approximately half the area of the cover member, said cover forming panels being folded upon each other with the reinforcing panels between the inner and outer panels and secured together in said folded relation to provide three thicknesses of material which have the appearance of a solid board-like member.

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