

May 17, 1938.

S. REICH

2,117,502

FOLDABLE CONTAINER

Filed Feb. 21, 1936

2 Sheets-Sheet 1

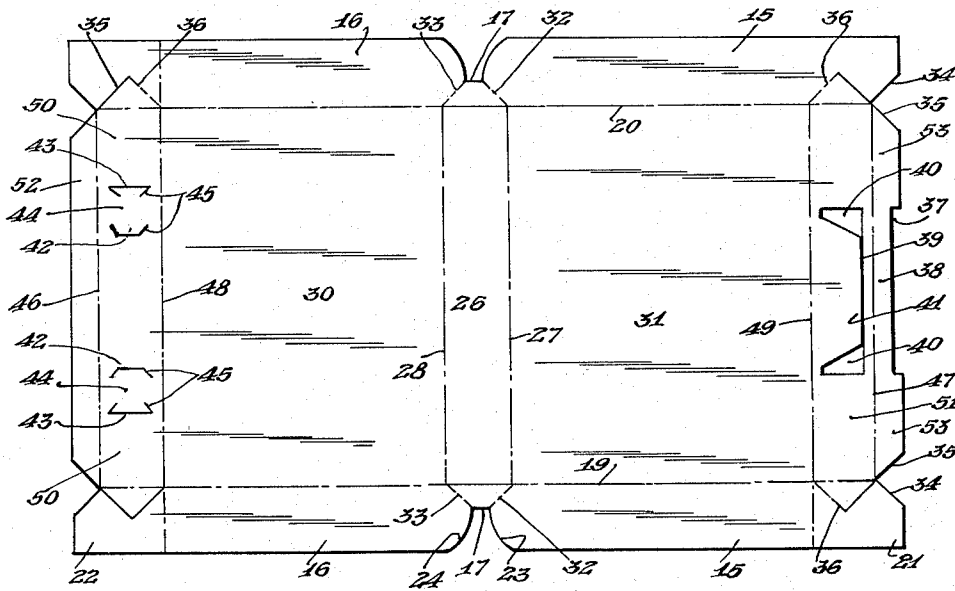


Fig. 1

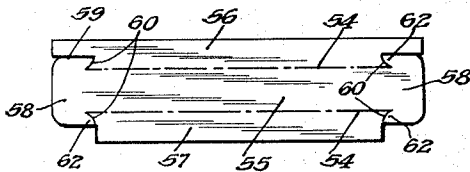


Fig. 2

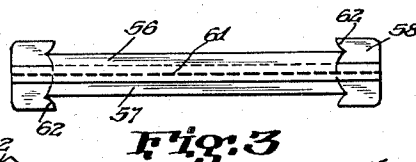


Fig. 3

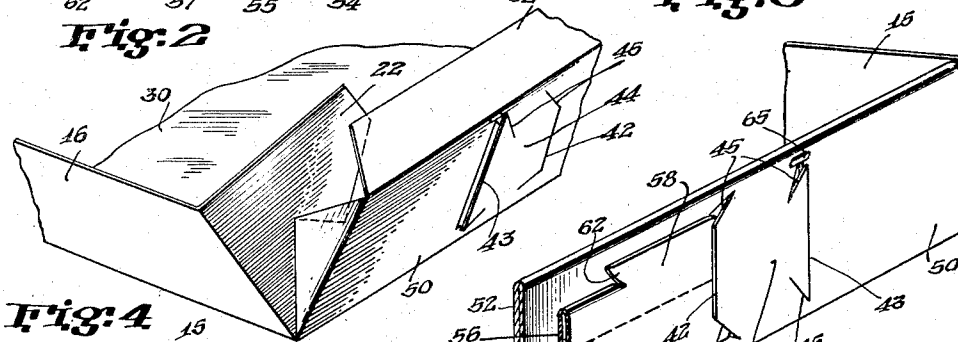


Fig. 4

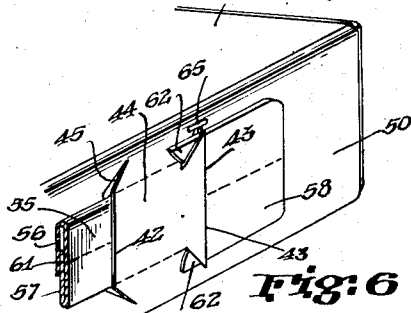


Fig. 5

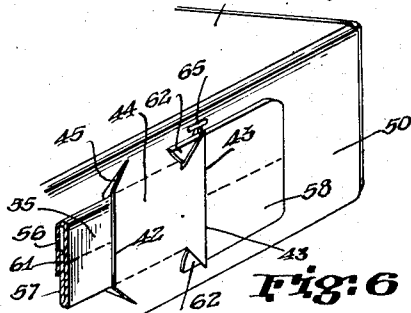


Fig. 6

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2 Sheets-Sheet 2

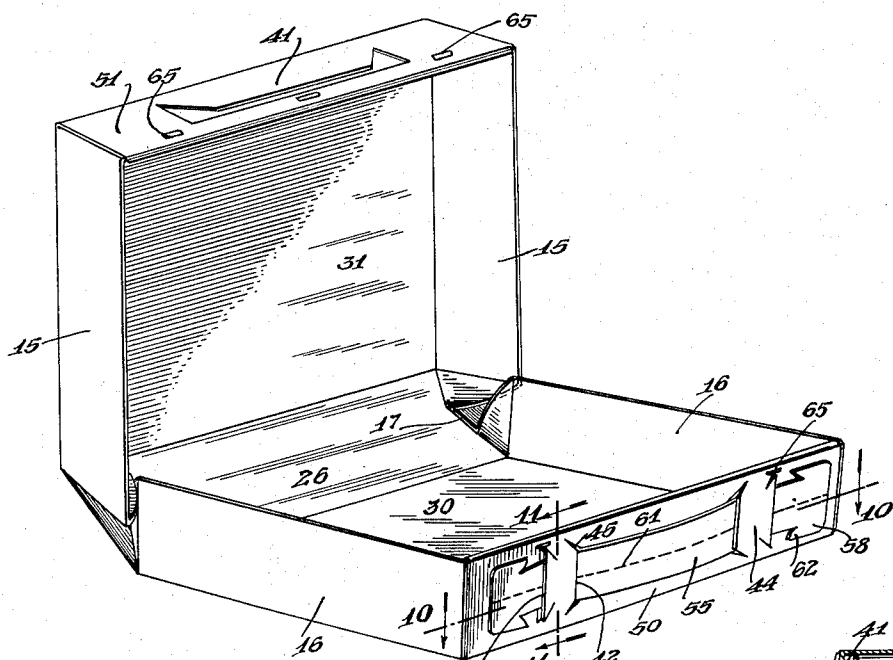


Fig: 7

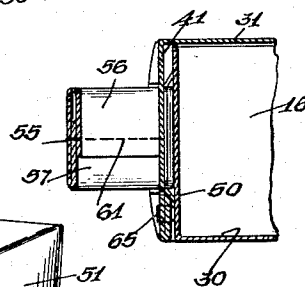


Fig: 9

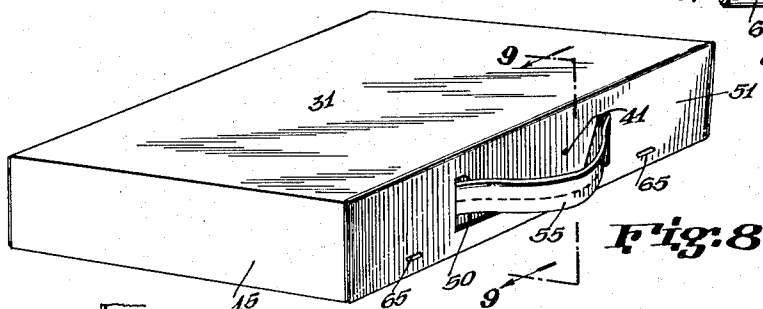


Fig: 8

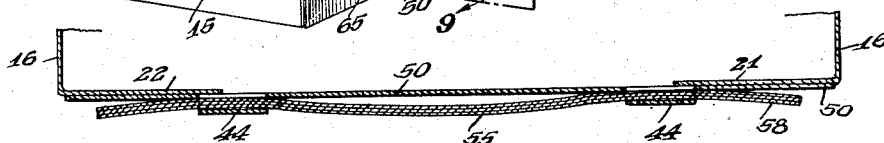


Fig: 10

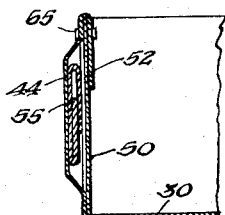


Fig: 11

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FOLDABLE CONTAINER

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Application February 21, 1936, Serial No. 65,011

2 Claims. (Cl. 229—52)

This invention relates to foldable containers with special reference to types made from a single blank of sheet material, and adapted to be carried by hand.

5 An object of the invention is to provide a strong, lightweight container, constructed of inexpensive material, capable of opening to the full extent, and when closed prevent the entrance of rain or snow.

10 A further feature is in the provision of a blank sheared and creased to fold into a container of pleasing appearance, suited to receive and safely secure whatever contents may be desired, up to capacity limit.

15 Another purpose is in the production of a collapsible handle adapted to be securely engaged in such manner as to equally distribute the weight of the container and its contents, and which can be removed at will.

20 These and other advantageous purposes, which will be recognized as the description proceeds, are accomplished by the novel construction, combination and arrangement of parts hereinafter described and illustrated in the accompanying drawings, constituting an essential component of this disclosure, and in which:—

Figure 1 is a plan view of the container blank as sheared and scored ready for erection.

Figure 2 is a similar view of the handle blank.

30 Figure 3 is a plan view of the handle as folded, reinforced and ready for insertion.

Figure 4 is a fragmentary perspective view of the left-hand, front corner, and handle-carrying portion of the device as partially folded.

35 Figure 5 is a similar perspective view of the opposite corner, showing the folding operation completed and the handle initially entered into its engaging loop.

40 Figure 6 is a like view of the same, the handle being shown as fully engaged.

Figure 7 is a perspective view of the container in an open position.

Figure 8 is a similar view showing the container closed and handle extended for use.

45 Figure 9 is a fragmentary sectional view taken on line 9—9 of Figure 8.

Figure 10 is a longitudinal sectional view of the container front wall and handle, taken on line 10—10 of Figure 7.

50 Figure 11 is a transverse sectional view taken on line 11—11 of Figure 7.

55 In Figure 1 an elongated rectangular blank is indicated as having been die cut from any preferred sheet material, as cardboard of the requisite thickness and strength, to produce two con-

tainer end elements 15—16 along its respective side edges.

These elements are limited in width by scored lines 19—20 which determine the height of the container end walls, and hence the thickness or 5 width of the container.

The outer corners 21—22 of these pairs of end elements present sharp right-angles, while their adjacent inner corners 23—24 are curved, the intervening space being limited by inset edges 17 10 extending from the body of the blank.

Intermediate the length of the blank is a transverse element 26, bounded at its ends by the scored lines 19—20, and at its sides by scored lines 27—28, on the other sides of which are the main 15 side elements 30—31 of the container.

Angularly disposed score lines 32—33 extend from the junctions 19—27, and 19—28 to the ends of the inset edges 17—18 respectively, to permit bending.

20 Opposite the square corners of the end elements 15—16 are shear cuts 34 extending from points midway the width of these elements, at an angle of approximately 45 degrees to the score lines 19—20.

25 Other shear cuts 35 are made in the ends of the main side elements 30—31, extending into the side elements at angles of approximately 90 degrees with the cuts 34, forming angular grooves in the ends of the blank, and score lines 36 30 extend from the inner ends of these cuts to the longitudinal score lines 19—20.

The outer edge of the main side element 31 contains a shallow longitudinal recess 37, inwardly of which is a bar 38 of corresponding 35 length, separated by a shear cut 39 from the main portion of the element 31, triangular openings 40 reaching from the shear cut into the body of the blank, and having between them a tongue 41.

40 In the opposite side element 30 are two pairs of opposed slits 42—43, respectively inner and outer, arranged in a row contiguous to the outer edge of the blank and having between each pair loop-like members 44, the slits 42 having diverging 45 terminals 45 and the slits 43 having converging terminals 45.

Outwardly beyond the slits 42—43 is a score line 46 extending from the points of intersection of the shear cuts 34—35 and a similar score line 50 47 extends from corresponding points in the blank 31.

A second row of score lines 48 is formed parallel to the line 46, at a distance equivalent to the width of the side elements 15—16, and cor- 55

respondingly, a similar row of score lines 49 is formed in the side member 31, the elongated elements 50 and 51 respectively, constituting the upper sides of the container, while further out

5 beyond the lines 46—47 are edge elements 52—53.

The handle, shown in Figures 2 and 3 in detail, consists of a blank having straight longitudinal edges, one being reduced in length at both ends.

Score lines 54 extend lengthwise the blank, at 10 equal distances from these edges, having between them the main handle bar element 55, adjacent the reinforcing bar elements 56—57.

The ends 58 of the bar element 55 are enlarged in width, their outer corners being rounded 15 and the side edge, next to the bar 56, having a shear cut 59, the other edge extending to the ends of the bar 57, both ends having shear cuts 60 leading angularly outward to the score lines 53—54.

20 When the handle is completely formed, the bar 57 is bent on the line 54 and the bar 56 turned thereover on the line 53 thus doubly reinforcing the handle, these several bars being secured by an adhesive, and further fastened by a central 25 longitudinal row of stitches 61, while the ends or heads of the bar present pairs of barbs 62 for a purpose further on evident.

In assembling the container elements, the sides 15—16 are bent upward at right-angles, on the 30 lines 19—20 to the top and bottom members 30—31, which are folded on the lines 27—28 at the side edges of the end element 26.

The narrow outer portions 52—53 of the members 30—31 are bent on the lines 46—47 into 35 juxtaposition, producing smoothly rounded upper edges and having between them the end portions of the side elements, which eventually may be rigidly secured by rivets 65.

The completed handle has its ends 58 entered 40 through the cuts 42, below the loops 44 and outwardly past the cuts 43, in which position it may be extended at full length, flat against the outer front container element 50, or its central portion may be drawn outwardly, as best seen in Figure 45 10.

In this latter position the handle end barbs 62 engage the slits 45 in a manner to normally prevent removal of the handle.

When closing the container the curved inner ends 23—24 of the side members fold on the lines 32—33, the side elements 15 overlying the corresponding elements 16 and the front elements 51 enclosing the corresponding element 50.

The tongue 41 is bent outwardly to permit the handle 55 to extend through the space between the cut-outs 40 and eventually bent inwardly, covering the space as best seen in Figure 8.

From the foregoing, it will be seen that a 5 strongly constructed container has been disclosed in the best known form of its embodiment, without reference to size or proportions, which, like minor modifications, fall within the tenor and scope of the appended claims. 10

Having thus described the invention, what is claimed as new and sought to secure by Letters Patent, is:—

1. A rectangular container comprising a blank having a relatively foldable bottom, side and 15 end walls and top closures, said end walls and closures being superposed when the container is closed, one of said closures having two spaced pairs of transverse slits having respectively angularly converging and diverging terminals and 20 the other presenting an opening, a flexible tongue extending into the opening, and a handle having enlarged heads having barbed ends to pass through the mentioned slits to engage the angularly converging and diverging terminals thereof, 25 said handle being accessible through the opening in the mating closure when the container is closed, the opening being concealed by said tongue.

2. In a container made of sheet material including a body having opposed closures movable 30 into superposed relation, one of said closures having two spaced pairs of transverse slits presenting a raised loop between each pair, the slits having respectively angular converging and diverging 35 terminals, the other closure having a central rectangular opening and a flexible tongue partially filling the opening, a handle formed of a plurality of bars folded one over another and secured along their longitudinal median line, 40 heads on said handle enlarged equally at both edges of said bars, said heads adapted to pass through the mentioned slits below said loops, and barbs on the inner ends of said enlarged heads adapted to interengage the angular ends of 45 the mentioned slits, the bight of the handle bars passing through the mentioned opening in the mating closure, over said tongue when the container is closed, said bars being slidable below said loops when the handle is extended flat at 50 full length.

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