Dec. 14, 1943. I. L. WILCOX 2,336,763

CONTAINER

Filed March 6, 1941

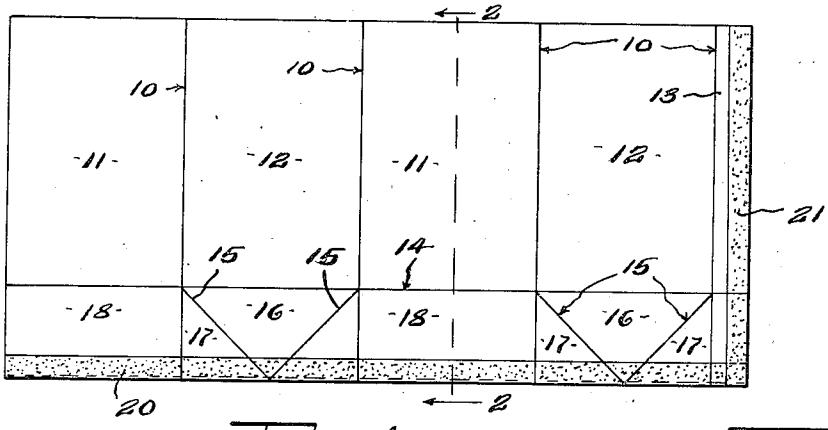


Fig-1

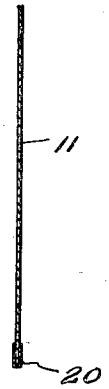


Fig-2

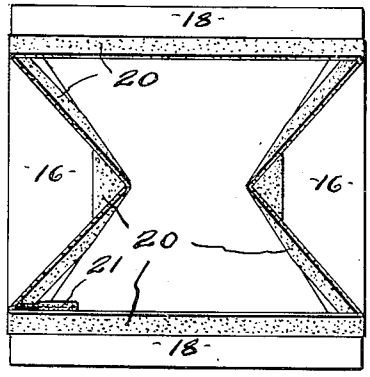


Fig-3

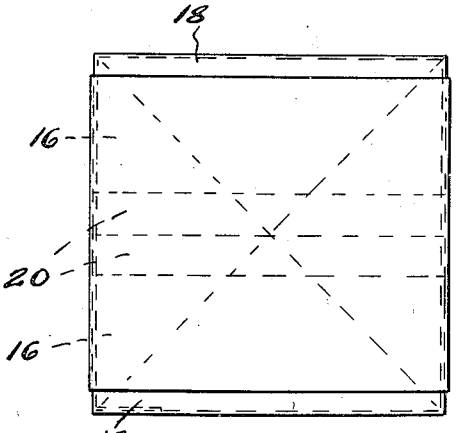


Fig-4

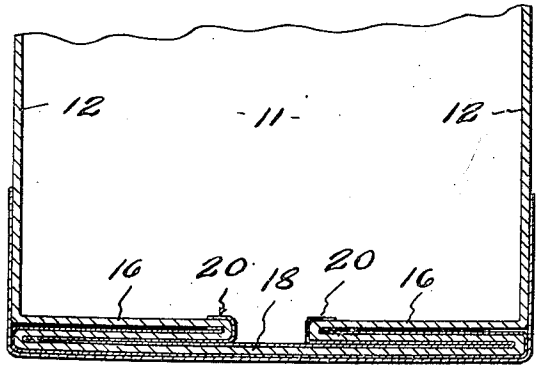


Fig-6

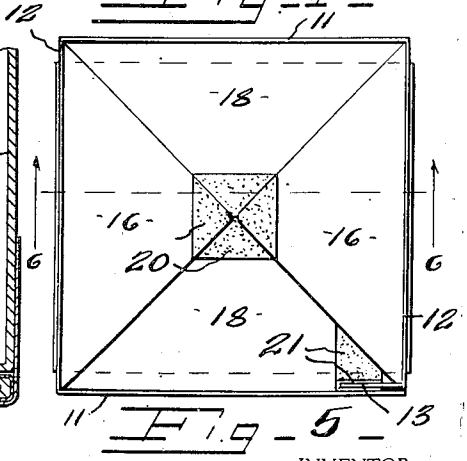


Fig-5

INVENTOR.
Isaac L. Wilcox

BY Bodell & Thompson.
ATTORNEYS.

Patented Dec. 14, 1943

2,336,763

UNITED STATES PATENT OFFICE

2,336,763

CONTAINER

Isaac L. Wilcox, Fulton, N. Y., assignor to Oswego Falls Corporation, Fulton, N. Y., a corporation of New York

Application March 6, 1941, Serial No. 382,035

2 Claims. (Cl. 229—37)

This invention relates to containers formed from sheet fibrous material such as paper board and intended particularly for the packaging of liquid products, such as milk. More particularly the invention is directed to the formation of the body and bottom end closure of such a container.

This invention has as an object a paper container for liquid products, the container and the bottom end closure thereof being formed from a one-piece integral blank which has been previously coated to render the same entirely impervious to liquids for which the containers are to be used, and which has been previously processed, whereby it is only necessary to fold one end of the blank to form the bottom closure of the container, and this bottom closure is hermetically sealed by a short application of heat and without the application of any glue or adhesive in the dairy, all whereby the machinery for fabricating the container and the time employed in the fabrication of the container is reduced to a minimum, the blanks from which the containers are made being particularly adapted to be expeditiously shaped and formed into containers by machinery.

The invention consists in the novel features and in the combinations and constructions hereinafter set forth and claimed.

In describing this invention, reference is had to the accompanying drawing in which like characters designate corresponding parts in all the views.

Figure 1 illustrates a blank from which the container may be formed.

Figure 2 is a vertical sectional view of the blank taken on line 2—2, Figure 1.

Figure 3 is a top plan view of the container with the end closure panels partially folded inwardly.

Figure 4 is a top plan view of the container as it appears with the end closure completely sealed.

Figure 5 is a view looking into the interior of the container after the end closure panels have been folded and sealed in place.

Figure 6 is a sectional view taken on line 6—6, Figure 5.

The container is formed from a flat blank, as shown in Figure 1, provided with spaced longitudinal score lines 10 defining oppositely disposed side wall panels 11, 12 and a side wall lap 13. The blank is also provided with a transversely extending score line 14 spaced from one end thereof to form inwardly folding end closure panels. These panels, adjacent the side panels 12, are provided with converging score lines 15 which define triangular shaped portions 16, 17. The end panels 18, adjacent the side panels 11, are of rectangular formation.

The end closure is formed by first folding the triangular panels 16 inwardly and subsequently folding the panels 18 inwardly. The dimensions of the panels are such that the apexes of the panels 16 meet at the center of the container, and the edges of the panels 18 abut. The blank is scored and coated with a substance to render the blank, and accordingly the subsequently formed container, impervious to liquids for which the container will be used.

For example, if the container is to be used for liquid food products, such as milk, I coat the blank with a vinyl resin such as the copolymer of vinyl acetate and vinyl chloride.

In addition to coating the inner surface of the blank, it is necessary to coat any portion of the edge of the blank which may be exposed on the interior of the container and which is contacted by the liquid content thereof. To block off such exposed edge portions of the blank and thereby produce an entirely impervious container, a tape 20 is applied to the lower edge of the blank and a similar tape 21 applied to the side edge adjacent the side wall lap 13. The tapes 20, 21 overlie the surface on opposite sides of the blank adjacent the edge thereof. The tapes 20, 21 are formed of impervious sheet material which, at normal temperatures, presents a hard, non-tacky, surface and which is heat sealable. I prefer the tapes 20, 21 to be formed out of the same material with which the blank proper is coated. The scoring, coating and application of the tapes 20, 21, is done at the container manufacturing plant, the impervious coated blanks being shipped to the dairy or packaging plant in flat formation.

The blanks are shaped to tubular formation with the side wall lap 13 overlying the marginal surface adjacent the panel 11 and is secured thereto through the medium of the tape 21 by a short application of heat and pressure thereto. The blank is shaped to tubular form upon a suitable mandrel and while positioned on the mandrel the triangular panels 16 and the rectangular panels 18 are successively folded inwardly and thereupon heat and pressure is applied to the end portion of the container causing the material of the tape 20 to soften and flow together with the result that the overlapping

portions of the panels are securely sealed together.

What I claim is:

1. A container comprising a tubular body, a tape consisting of a strip of impervious heat sealing adhesive material secured to one end of the body and overlying the inner and outer surfaces of the body adjacent said end, said end portion of the body being formed with inwardly foldable end closure panels arranged in overlapping relation, and said tape serving to effectively seal the overlapping portions of said panels.

2. A container comprising a blank of sheet material formed into a tubular body rectangular in cross section, opposite sides of the body being provided with score lines adjacent one end thereof and defining triangular end closure panels, the opposite sides of the body adjacent said end being scored to form rectangular infolding end panels arranged in overlapping relation to said triangular panels, a tape consisting of a strip of tough flexible impervious heat sealing adhesive material secured along the end edge of the body in which said panels are located and serving to effectively seal the overlapping portions of said panels.

ISAAC L. WILCOX.