

Dec. 13, 1938.

C. T. WALTER

2,140,177

CONTAINER

Filed Dec. 3, 1937

2 Sheets-Sheet 1

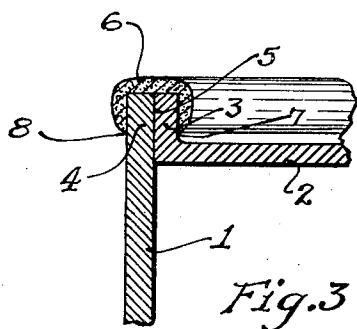


Fig. 3

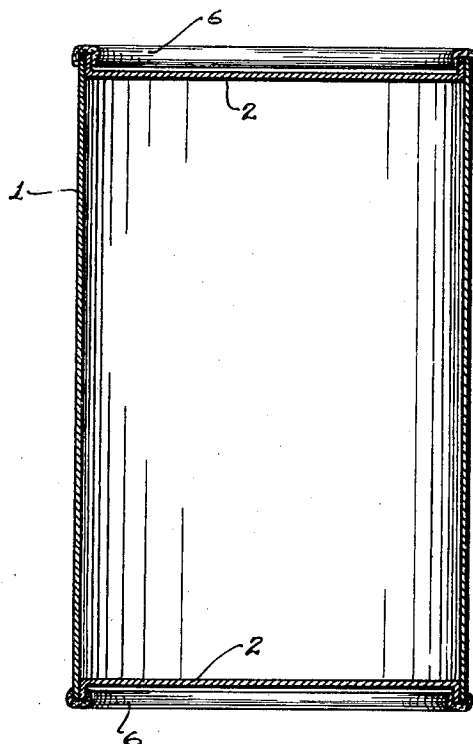


Fig. 2

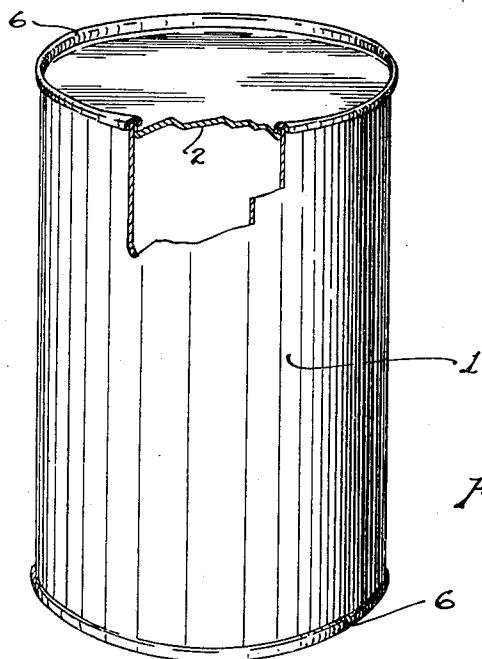


Fig. 1

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2 Sheets-Sheet 2

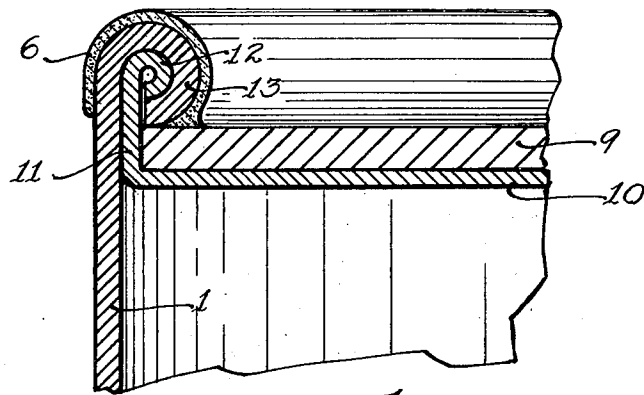
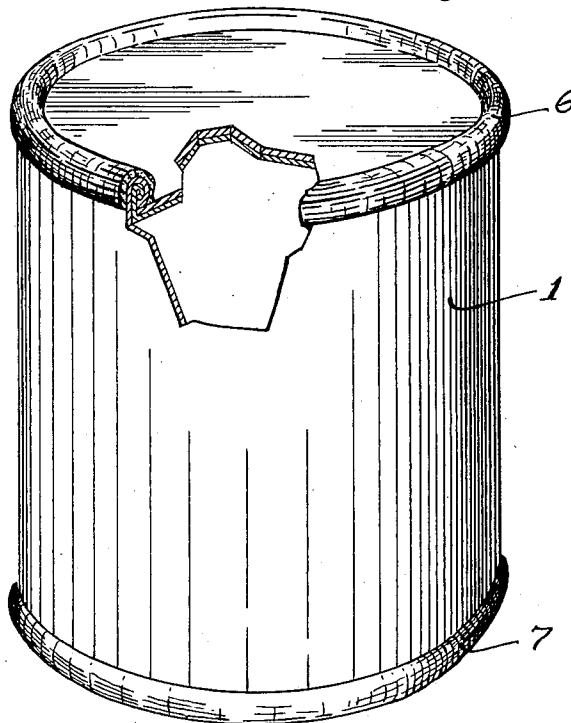


Fig. 5.

Fig. 4.



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UNITED STATES PATENT OFFICE

2,140,177

CONTAINER

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Application December 3, 1937, Serial No. 177,991

12 Claims. (Cl. 229—3.1)

This invention relates to an improved container.

This application is in part a continuation of my copending application, Serial No. 78,966, filed May 11, 1936, entitled Container and of my copending application, Serial No. 82,435, filed May 29, 1936, entitled Fiber container.

One of the objects of the invention is to provide an improved fibrous container.

Another object of the invention is to provide an improved fibrous container having reinforced end edges.

Another object of the invention is to provide an improved fibrous container having reinforced end edges, sealed against capillary attraction of moisture.

Other objects of the invention will be apparent from the description and claims which follow.

In conventional practice, cleaning and scouring compounds are commonly packed for household use in containers of the type comprising a fibrous body wall having metallic ends crimped or otherwise secured to the fibrous body. In use, these containers are constantly brought in contact with wetted and heated surfaces such as sinks, drain boards, floors, stoves, and the like. If the containers are rested upon such surfaces on their ends, the metal becomes rusty, with the result that the container becomes unsightly and leaves an unsightly mark upon all surfaces with which it is thereafter brought in contact. If rested upon its sides, the fibrous body of the container, being of a highly absorbent nature, will absorb moisture from the contacted surface with the result that the body will very often collapse before the contents of the container can be used. Also, when rested on its sides, the fibrous body walls serve to transmit moisture to the contents of the container. In accordance with the present invention, an all-fibrous container is sealed at its ends in a manner to prevent contact of the container with damp surfaces, whether the container be rested on the ends or sides thereof.

Reference is had to the drawings in which like characters of reference are used to designate similar parts.

Figure 1 is a perspective view, partly broken away, illustrating one type of fibrous container utilizing the sealing means of the present invention.

Figure 2 is a vertical sectional view of the container illustrated in Figure 1.

Figure 3 is an enlarged detail view of a section of the container shown in Figure 1 in which the

container sealing means is more clearly exemplified.

Figure 4 is a perspective view partly broken away, illustrating another type of fibrous container with which the present invention may be employed.

Figure 5 is an enlarged detail view, partly in section, showing the improved end edges of the container illustrated in Figure 4.

The container illustrated in Figures 1 to 3, comprises a tubular fibrous body wall 1, closed at its ends by means of fibrous discs 2, annularly flanged at the peripheral edges as at 3. The discs 2 are invertedly inserted within the ends of body 1 in a manner to form peripheral marginal edges 4 at each of the container ends. Discs 2 may be suitably secured within body 1, as at 5, by use of a suitable adhesive, between the surfaces of flanges 3 and the inner wall of body 1.

In accordance with the present invention a continuous bead 6 of congealable plastic water-resistant material, such for example, celluloid, gutta-percha, synthetic resins, or the like is applied to the ends of the container, preferably in a manner to extend a suitable distance against the inner and outer side walls of the flanged portion 4, as at 7 and 8.

The container illustrated in Figures 4 and 5, comprises a tubular fibrous body wall 1, closed at its ends with a fairly thick fibrous disc 9, which is supported against inward pressure by a somewhat thinner disc 10. Fibrous disc 10 is cupped, as at 11. The cupped edge 11 is designed to be inter-rolled, as at 12, with the rolled edge 13 of body 1.

As shown in Figure 5 the rolled over portion 13 of body 1 is reinforced with a continuous bead 6 of congealable plastic water-resistant material.

Bead 6 comprises a continuous protecting ring and may be applied to the ends of the container in the form of a plastic through the medium of a suitable solvent. When applied in this manner, the solvent will readily evaporate from the mass leaving a tough layer rigidly bonded to the marginal end flange 4 or roll 13, providing effective protection to the ends of the container.

The bead 6 also may be applied to the container ends by dipping or through the agency of suitable mechanical means. One means for applying a bead of this character is described in my copending application, Serial No. 54,181, filed December 13, 1935, entitled Applicator.

It will be seen that containers treated in

accordance with the present invention may be rested upon wetted or heated surfaces on their ends or on their sides without harm either to the container or to the contents thereof.

- 5 The plastic compound forming bead 6 may be suitably tinted such that the bead 6, when applied to the container ends, will most attractively add to the appearance of the container.

The plastic bead 6 may be made of such thermo-plastic materials as natural or synthetic resins. In such instances, the bead may be applied through the agency of heat only, eliminating the necessity of a solvent.

An example of a material which may be employed in this manner is a mixture of natural resin with some suitable plasticizer, such as paraffin wax. If a glossy jet black surface is desired, a quantity of pitch may be included in the mixture. A mixture of such materials will melt to a liquid state at about the boiling point of water and may be applied to the container ends by simply dipping the edges of the container into the liquid material which cools and hardens upon contact with air.

20 A bead prepared from celluloid or a similar material may be preformed as a ring or ferrule of U shape and applied after the container has been assembled by attaching the ring to the edges by means of heat and mechanical pressure, no solvent or adhesive being necessary. As is well known, celluloid and materials of this character are water-resistant and are relatively hard and elastic at temperatures approximately 185° F. and below.

35 The term "fibrous", as used in the claims, will be understood to include fiber board, straw board, paper board, pulp board, and other similar materials adapted for the manufacture of containers.

40 I claim:

1. In a container including a fibrous body and end closures, a bead of congealable plastic material relatively hard and elastic at temperatures approximately 185° F. and below bonded to the outer end edges of the container, the bead being extended against the outer body wall of the container.

50 2. In a fibrous container including a body wall having an end closure forming a peripheral marginal flange at the container end, a bead of congealable plastic material relatively hard and elastic at temperatures approximately 185° F. and below bonded to the flanged end of the container.

55 3. In a fibrous container including a body wall having end closures forming peripheral marginal flanges at opposite ends of the container, a bead of plastic material relatively hard and elastic at temperatures approximately 185° F. and below bonded to each of the flanged ends of the container.

60 4. In a fibrous container including a body wall having end closures forming peripheral marginal flanges at opposite ends of the container, a continuous substantially U-shaped ring of plastic material relatively hard and elastic at temperatures approximately 185° F. and below bonded to the flanged ends of the container.

65 5. In a fibrous container including a body wall having end closures forming peripheral marginal flanges at opposite ends of the container, a con-

tinuous substantially U-shaped ring of plastic material relatively hard and elastic at temperatures approximately 185° F. and below bonded to the flanged ends of the container, the ring being extended against the inner and outer walls of the flanged ends.

6. In a fibrous container including a body wall having end closures forming peripheral marginal flanges at opposite ends of the container, a coating of congealable plastic material relatively hard and elastic at temperatures approximately 185° F. and below bonding the flanged ends of the container, the material when congealed forming a continuous substantially U-shaped ring extending against the inner and outer walls of the flanged ends.

7. In a fibrous container including a body wall having an end closure forming a peripheral marginal flange at the container end, a bead of congealable plastic material relatively hard and elastic at temperatures approximately 185° F. and below bonding the flanged end, the material when congealed forming a continuous substantially U-shaped ring extending against the inner and outer walls of the flanged end.

8. In a container including a fibrous body and an end peripheral marginal flange, a preformed plastic bead relatively hard and elastic at temperatures approximately 185° F. and below bonded over the flange.

9. A container including a tubular body portion, a cupped fibrous disc, and a flat fiber disc, the edges of the body portion and the edges of the cupped disc being inter-rolled inwardly maintaining the flat fibrous disc between the flat portion of the cupped disc and the roll, having a protective layer of congealable plastic material relatively hard and elastic at temperatures approximately 185° F. and below on the outer surface of the roll.

10. A container including a tubular body portion, a cupped fibrous disc, and a flat fibrous disc, the edges of the body portion and the edges of the cupped disc being inter-rolled inwardly maintaining the flat fibrous disc between the flat portion of the cupped disc and the roll having a bead comprising a coating of congealable plastic material relatively hard and elastic at temperatures approximately 185° F. and below covering the roll.

11. A container including a tubular body portion, a cupped fibrous disc, and a flat fiber disc, the edges of the body portion and the edges of the cupped disc being inter-rolled inwardly maintaining the flat fibrous disc between the flat portion of the cupped disc and the roll having a bead comprising a coating of congealable plastic material, relatively hard and elastic at temperatures approximately 185° F. and below bonded to the roll.

12. A container including a tubular body portion, a cupped fibrous disc, and a flat fibrous disc, the edges of the body portion and the edges of the cupped disc being inter-rolled inwardly maintaining the flat fibrous disc between the flat portion of the cupped disc and the roll having a preformed bead formed of congealable plastic material relatively hard and elastic at temperatures approximately 185° F. and below bonded over the roll.

CHARLES T. WALTER. 70

CERTIFICATE OF CORRECTION.

Patent No. 2,140,177.

December 13, 1938.

CHARLES T. WALTER.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 2, second column, lines 32 and 51, claims 9 and 11 respectively, for the word "fiber" read fibrous; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 31st day of January, A.D. 1939.

Henry Van Arsdale

(Seal)

Acting Commissioner of Patents.