Oct. 9, 1962 F. POLLICK 3,057,537

COVER FOR PAPER COFFEE CUP

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Fig. 1

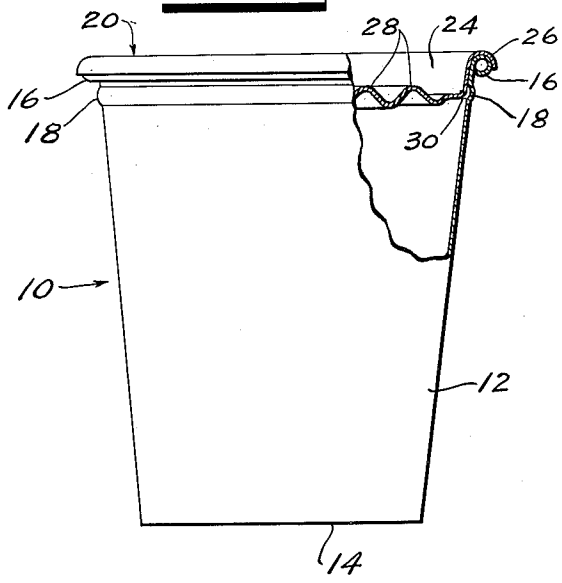


Fig. 2

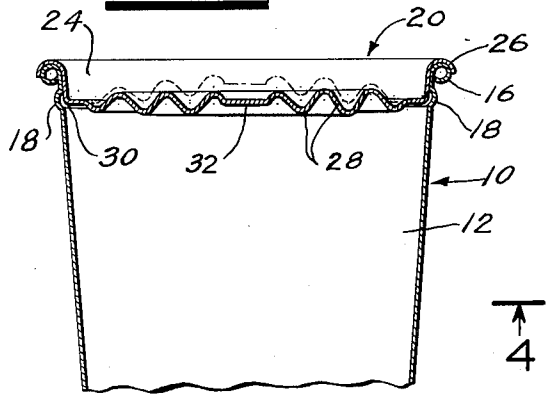


Fig. 3

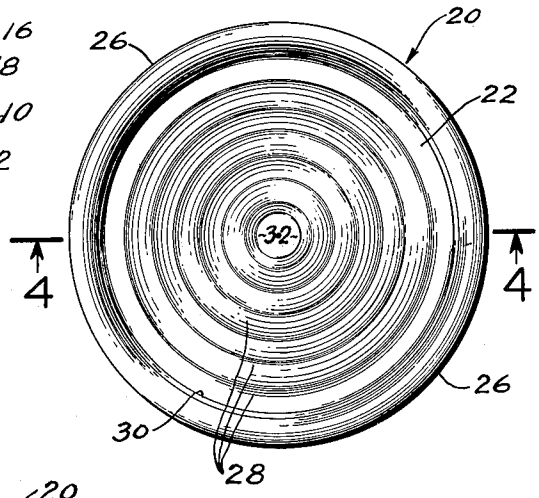
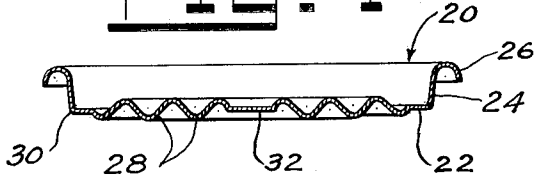


Fig. 4



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Fig. 5

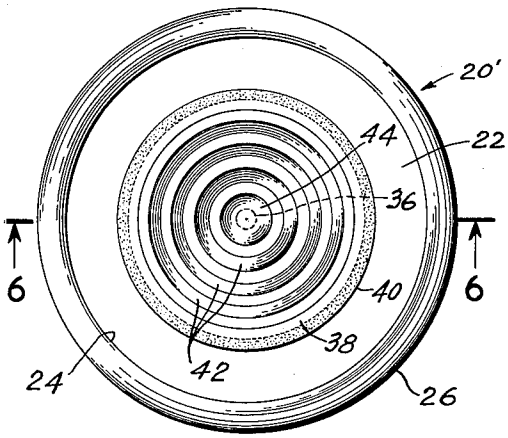


Fig. 7

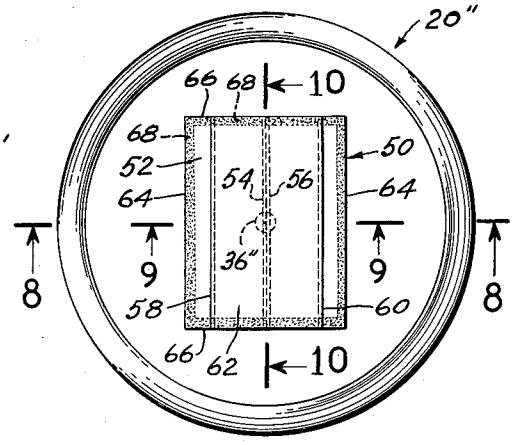


Fig. 6

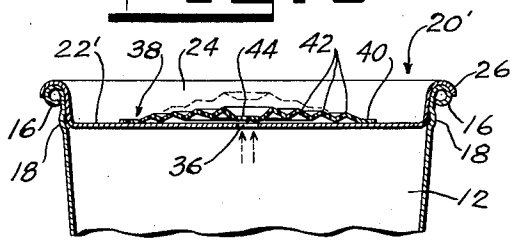


Fig. 8

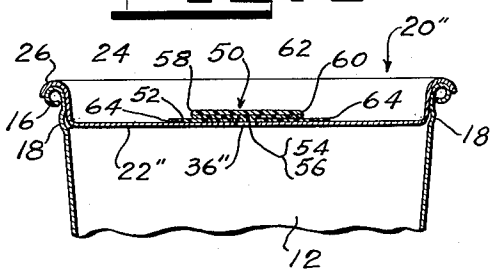


Fig. 9

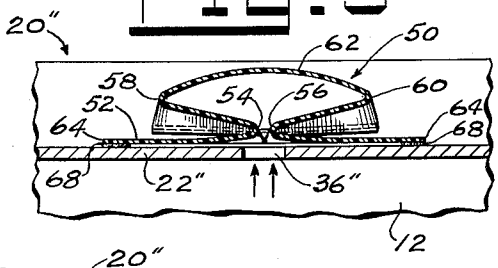
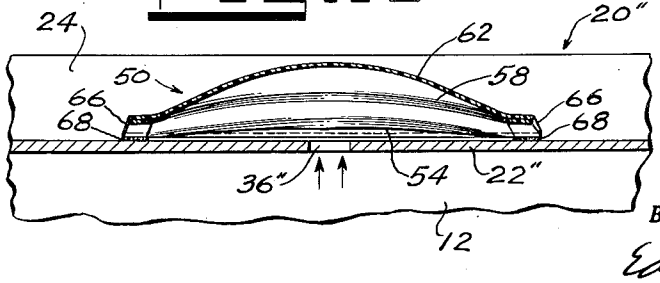


Fig. 10



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COVER FOR PAPER COFFEE CUP

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Filed Nov. 17, 1960, Ser. No. 69,901
2 Claims. (Cl. 229—43)

This invention relates generally to paper containers and more particularly to a leak-proof cover for a paper coffee cup and the like.

A primary object of the invention is to provide a flexible leak-proof cover of the bellows type for a paper container.

Another object of the invention is to provide a paper cover for a container that is easily applied to and removed from the container by hand.

A further object of the invention is to provide a paper cover for a container that is adapted to flex readily under pressure and that permits a larger latitude of pressure changes within the container.

It is also an object of the invention to provide a leak-proof paper cover for a paper container that is simple in construction and that can be manufactured and sold at a reasonable cost.

For further comprehension of the advantages and benefits of the invention reference will be had to the accompanying drawings forming a material part of the disclosure of the invention, wherein

FIG. 1 is a side elevational view of a paper container having a cover embodying one form of the invention.

FIG. 2 is a central sectional view of the top end of the container shown in FIG. 1.

FIG. 3 is a top plan view of the cover shown in FIG. 1.

FIG. 4 is a cross-sectional view taken on the line 4—4 of FIG. 3.

FIG. 5 is a top plan view of a cover for a paper container embodying a modified form of the invention.

FIG. 6 is a cross-sectional view taken on the line 6—6 of FIG. 5 showing the cover in position on a paper container.

FIG. 7 is a top plan view of a paper cover embodying another modified form of the invention.

FIG. 8 is a sectional view taken on the line 8—8 of FIG. 7, showing the cover in position on a paper container.

FIG. 9 is an enlarged cross sectional view taken on the line 9—9 of FIG. 7.

FIG. 10 is a sectional view taken on the line 10—10 of FIG. 7.

Referring in detail to the drawings, in FIG. 1 a paper container such as a paper coffee cup **10** is shown. The paper cup is formed of heavy paper stock and has a tapered body **12** with a bottom wall **14** and is open at the top. The top edge of the body is looped outwardly forming an annular bead **16**. Adjacent the annular bead, the body of the cup is formed with an outwardly extending annular bulge **18**.

In accordance with the invention, the cup is provided with a paper cover **20** for closing the open top of the body of the cup. The paper cup **20** as best shown in FIGS. 3 and 4 comprises a circular disc-shaped body **22** of paper similar to the material of body **12** of the cup. The disc-shaped body **22** is formed with an upwardly and outwardly flaring rim or flange **24** which continues into a curved extremity **26** opening downwardly. The body of the cover is formed with spaced concentrically arranged corrugations **28** which start at a point remote from the peripheral edge **30** of the body of the cover and which end at a point closely spaced from the center of the body, leaving a flat portion **32** at the center. The disc-shaped body is imperforate.

In use, the paper cover **20** is readily clamped onto the top edge of the body of the cup, the curved extremity **26** embracing the looped bead **16** and the flanged rim **24** snugly contacting the upper edge or lip of the body of the cup, said extremity **26** and flanged rim **24** sealing the cup at its upper end whereby leakage of liquid is prevented. When the cover is in sealing position on the top edge of the cup as seen in FIGS. 1 and 2, the gases, steam and the like from the hot liquid in the cup or container press upwardly against the corrugated body of the cover, which constitutes a bellows, whereby the body expands upwardly as shown in dotted lines in FIG. 2 so that the cover holds its position on the top edge of the body and does not pop off or become displaced.

In the modified form of cover **20'** shown in FIGS. 5 and 6, the body **22'** of the cover is flat and formed with a central vent **36**. A thin circular plate **38** of flexible transparent plastic material is positioned over the vent **36** with its peripheral edge **40** secured to the flat body **22'** by adhesive or in any other suitable manner, the remainder of the plate being unattached. The plate **38** is formed with spaced concentric corrugations **42** extending from the periphery of the plate to a point closely spaced from the center of the plate leaving a smooth flat central portion **44**, said corrugations constituting a bellows. In all other respects, the cover **20'** is similar to the cover **20** and similar reference numerals are used to indicate similar parts.

In using the cover **20'**, the gases, steam and the like arise from the hot coffee or other liquid in the container or cup and pass in the direction of the arrow in FIG. 6 out through the vent **36** and impinge against the flexible plastic plate **38** expanding said plate upwardly as shown in dotted lines in FIG. 6. This expansion prevents displacement of the cover **20'** on the cup or container.

Referring now to the modified form of paper cover **20''** shown in FIGS. 7 to 10, inclusive, this form of cover **20''** differs from the form of cover **20'** shown in FIGS. 5 and 6 merely in the shape and construction of the sealing device **50** for the vent **36''**. The sealing device comprises a rectangular shaped plate **52** of thin flexible transparent plastic material. The plate **52** is placed on the body **22''** of the cover so that the vent **36''** is disposed centrally thereof. The body of the plate is folded lengthwise at opposed points **54** and **56** closely spaced from its longitudinal center and at points **58** and **60** remote from said longitudinal center as viewed in FIG. 9, thereby providing a center section **62** which normally rests in flatwise condition upon the remainder of the plate as shown in FIG. 8. The elongated side edges **64** and the end edges **66** of the plate are fastened to the top surface of the body **22''** of the cover **20''** by adhesive as indicated at **68** or in any other suitable manner.

In using the form of cover **20''**, the hot gases or steam and the like pass outwardly in the direction of the arrows shown in FIGS. 9 and 10 through the vent **36''**, through the center of the plate **50** into the central tubular section **62** which is closed on all sides whereby the central section **62** is blown up or expanded into the shape of a flattened-out tube as shown in FIGS. 9 and 10 thereby relieving the pressure on the body portion **22''** of the cover and thus preventing displacement of the cover on the top of the cup or container.

While I have illustrated and described the preferred embodiments of my invention, it will be understood that changes in details of construction might be made without departing from the principle of the invention and I desire to be limited only by the state of the prior art and the appended claims.

I claim:

1. A cover for a paper coffee cup comprising a circular-shaped body with a central opening therein, and a thin rectangular-shaped plate of plastic material positioned over the opening in the circular shaped body, said plate

having its side edges and end edges secured to the top surface of the circular-shaped body, said plate being folded longitudinally providing a central fullness adapted to expand under pressure from hot gases passing through the opening in the circular-shaped body when the cover is in sealing position on a paper coffee cup.

2. A cover for a paper coffee cup as defined in claim 1 wherein the circular-shaped body is formed with a curved peripheral rim.

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