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NECK CONSTRUCTION FOR JUG

Filed March 5, 1956

Fig. 1

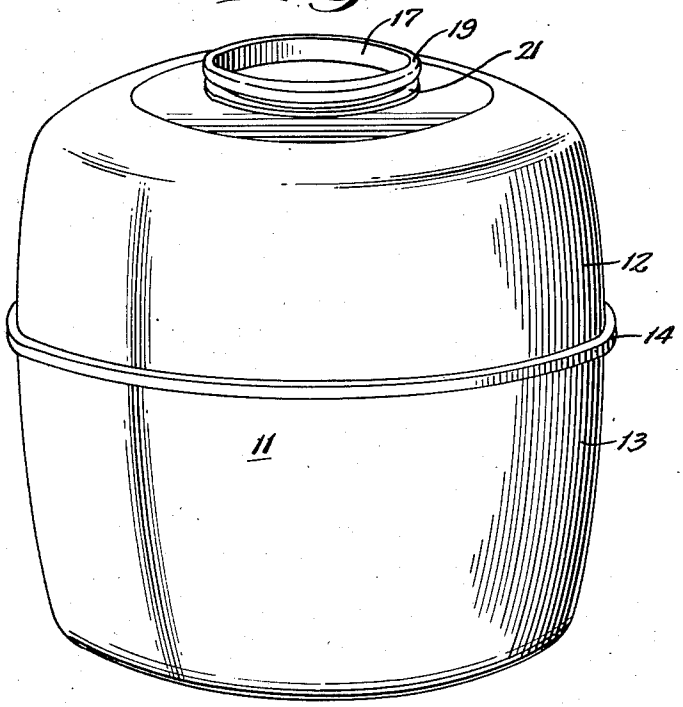


Fig. 4

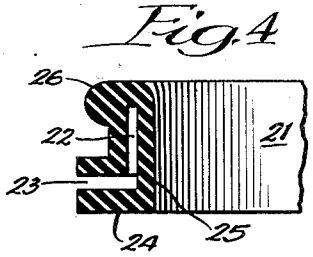


Fig. 2

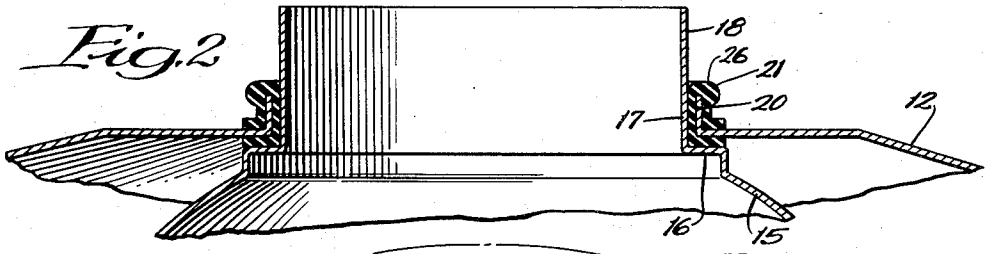
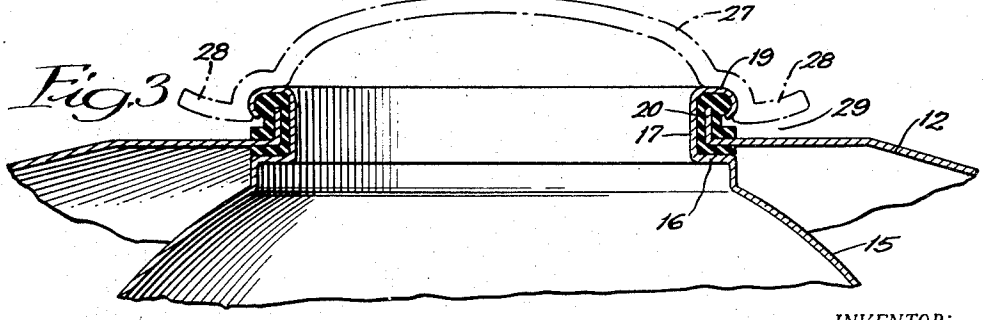


Fig. 3



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NECK CONSTRUCTION FOR JUG

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3 Claims. (Cl. 220—15)

This invention relates to a neck construction for a jug, particularly a jug of the type which is provided with double walls for the purpose of maintaining the temperature of materials stored therein.

The type of jug to which this invention relates is a very competitive one in which cost is very important, as is the quality of the product. It is an object of the invention to eliminate the conventional neck which heretofore has been a separate part which must be drawn and formed in a die, then inserted between the thermal barrier gasket at the top of the jug and which was crimped into the top of the upper part of the body.

It is another object of the invention to provide a mechanically locked joint between the top of the jug liner and the top of the jug body.

It is another object of the invention to provide a built-in gasket to prevent thermal flow or loss between the temperature inside the jug and the body outside. Preferably, this gasket is of a resilient material such as extruded or molded rubber or plastic.

It is also an object of the invention to provide ease of assembly of the jug by virtue of a shoulder which provides a stop around the diameter of the liner against which a tool or jig may be placed to support the entire assembly while the upper part of the liner is spun over to encompass the top of the gasket.

It is another object of the invention to provide a vertical flange at the top of the outer body portion of the jug so that the body is prevented from cutting through the gasket which might occur if the flange were not present when the jug is filled with liquid and subjected to normal jarring movements.

It is another object of the invention to provide a neck construction for a jug which will cooperate with a simplified closure member which may be readily removed and replaced when desired.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my device whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, wherein:

Figure 1 is a perspective view of a thermal jug constructed in accordance with the invention;

Figure 2 is a partial sectional view of the neck of the jug prior to spinning over the inner liner;

Figure 3 is a similar partial sectional view after the inner liner is spun over with one type of closure shown in dotted lines; and

Figure 4 is a partial sectional view of the thermal gasket member.

Referring specifically to the drawing for a detailed description of the invention, numeral **11** designates generally a thermal jug which may be formed of an upper metallic outer shell **12** and a lower metallic outer shell **13**, which shells are joined together in any suitable manner as shown at **14**. The inner shell which is also generally formed of sheet metal is shown at **15** and is bent

at the top thereof to provide a horizontal flange or shoulder **16**, and an upwardly extending portion **17** having an upper end **18**. As best shown in Figure 3, the upper end **18** is spun over a gasket generally indicated at **21**, the spun-over portion being shown at **19**.

The outer shell **12** is provided with a vertically extending flange **20** at the upper end thereof, as shown in Figures 2 and 3.

The gasket **21** which is formed preferably of extruded or molded rubber or plastic material includes a vertical slot **22** which communicates with a horizontal slot **23** as best shown in Figure 4. The gasket is also provided with a horizontal surface **24** communicating with a vertical inner surface shown at **25**. The upper end of the gasket **21** is provided with a rounded portion shown at **26**.

In assembling the gasket, the flat portion **24** seats on the shoulder **16** of the inner liner **15** and the vertical portion **20** of the outer shell **12** extends into the slot **22** in the gasket **21**. The horizontal portion of the outer shell **12** connecting with the flange **20** extends into the slot **23** in the gasket. After the gasket is thus assembled and seated on the shoulder **16**, it is very easy to utilize the flange **16** as a stop against which a tool or jig may be placed in order to support the assembly while the upper part of the liner **18** is spun over, as shown at **19**, to encompass the portion **26** of the gasket.

A cover member which also may be formed of extruded or molded rubber or plastic is shown in dotted lines at Figure 3 by the numeral **27** and is provided with a flange **28** around its periphery, which flange is spaced from the top of the outer shell **12** as shown at **29**, so that the fingers may be inserted between the two to permit easy removal of the closure **27**.

From the foregoing it is obvious that I have provided a greatly improved neck construction for thermal jugs which is inexpensive, which provides for ease in assembly, and which provides an efficient thermal barrier at the neck.

Some changes may be made in the construction and arrangement of the parts of my device without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope.

I claim as my invention:

1. A neck construction for a thermal jug, which jug includes an outer shell and an inner liner, said neck construction including upper portions of said shell and liner, said neck construction comprising, in combination: a horizontal annular shoulder formed on said upper portion of the inner liner, and an elongated vertical annular collar extending upwardly from said shoulder; said upper portion of the outer shell defining a horizontally extending annular wall of smaller inner dimension than the outer dimension of said annular shoulder on the inner liner and of larger inner dimension than the annular collar on the liner, and an upwardly extending annular collar of smaller height than the annular collar on the liner; a single preformed annular gasket fitted on the annular collar of the shell to engage the inner and outer walls of the shell's collar and to engage opposite annular portions of said shell's annular wall, and being of a size to engage annular portions of the outer wall of the liner's collar and of the liner's horizontal shoulder; a portion of the liner's collar extending above said gasket being spun over to define a lateral annular clamping wall engaging the gasket to compress same between said lateral clamping wall, said shell's annular wall, and the liner's shoulder, and to define a downwardly extending annular clamping collar engaging the gasket to compress same between said clamping collar, said shell's collar, and said liner's collar.

2. A neck construction for a thermal jug, which jug includes an outer shell and an inner liner, said neck construction including upper portions of said shell and liner, said neck construction comprising, in combination: a horizontal annular shoulder formed on said upper portion of the inner liner, and an elongated vertical annular collar extending upwardly from said shoulder; said upper portion of the outer shell defining a horizontally extending annular wall of smaller inner dimensions than the outer dimension of said annular shoulder on the inner liner and of larger inner dimension than the annular collar on the liner, and an upwardly extending annular collar of smaller height than the annular collar on the liner; gasket means surrounding the shell's collar and engaging opposite sides of the shell's annular wall, and engaging the liner's shoulder and liner's collar; and a portion of the liner's collar being spun over and engaging top and outermost portions of the gasket means to effect compressive seals between the horizontal walls and vertical collars on the liner and shell.

3. A neck construction for a thermal jug, which jug includes an outer shell and an inner liner, said neck construction including upper portions of said shell and liner, said neck construction comprising, in combination: a horizontal annular shoulder formed on said upper portion of the inner liner, and an elongated vertical annular collar extending upwardly from said shoulder; said upper portion of the outer shell defining a horizontally extending annular wall of smaller inner dimension than the outer dimension of said annular shoulder on the inner liner and of larger inner dimension than the annular collar on the liner, and an upwardly extending annular collar of smaller height than the annular collar on the liner; gasket means surrounding the shell's collar and engaging opposite sides of the shell's annular wall, and engaging the liner's shoulder and liner's collar, said gasket also defining an outwardly extending annular bead at its upper end; and a portion of the liner's collar, extending above said gasket, being spun over to engage and grip said annular bead on said gasket and to define lateral and vertical clamping walls which engage said gasket to effect compressive seals between the horizontal walls and vertical collars on the liner and shell.

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