June 28, 1966 J. B. AMES 3,258,375

METHOD OF MAKING A DISPENSING CONTAINER

Filed Sept. 15, 1965

Fig. 1.

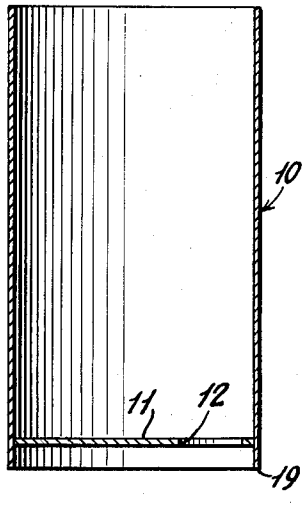


Fig. 2.

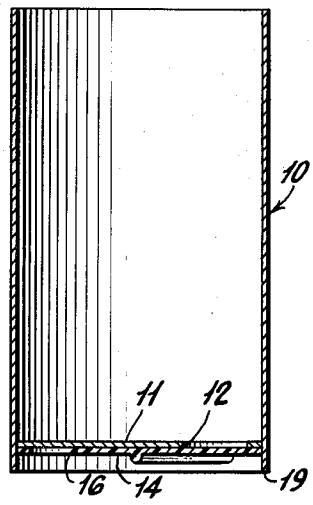


Fig. 3.

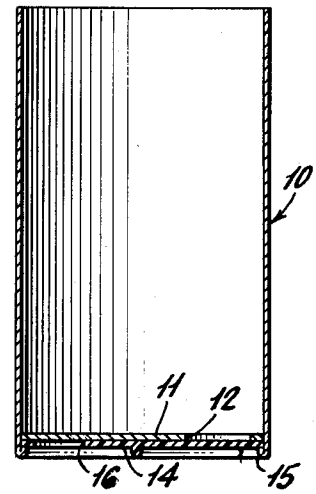


Fig. 4.

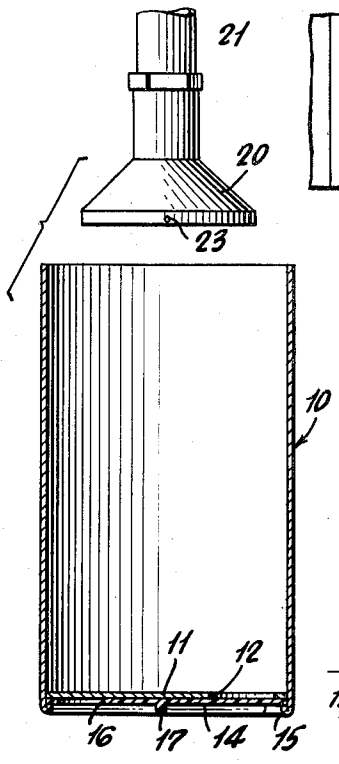


Fig. 5.

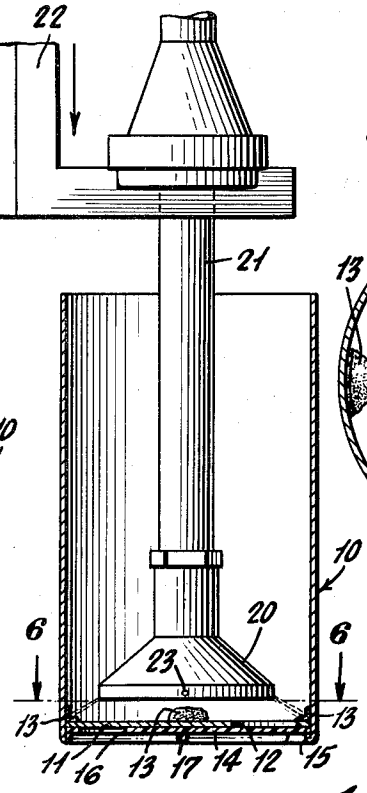
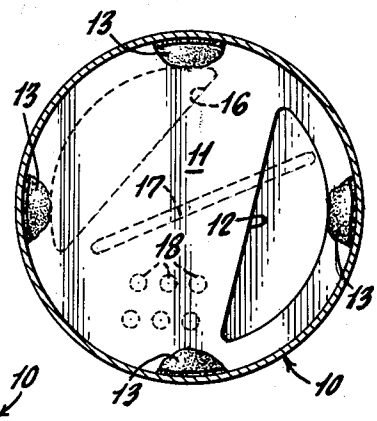


Fig. 6.



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3,258,375 METHOD OF MAKING A DISPENSING CONTAINER

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4 Claims. (Cl. 156—69)

This application is a continuation-in-part of my copending application Serial No. 319,450 filed October 28, 1963, and the invention relates to a method of making a dispensing container for fluent materials of the type commonly utilized for storing and dispensing condiments, such as salt or pepper, or any powdered material.

Heretofore disposable dispensing containers of the type produced by the method of this invention have been utilized and since such containers are only used until the contents thereof are exhausted and then discarded, the cost of such containers must be maintained at a minimum in order to render the same practical. Containers of this type usually include an elongated cylindrical body of cardboard, plastic or the like, having a closure at the lower end and a dispensing top at the upper end, such top usually including a disk fixed within the upper end of the container, such disk having an off-center dispensing aperture and a second disk in engagement with the upper surface of the first disk and rotatably received in the upper end of the container. The second disk is also provided with an off-center dispensing aperture which may be aligned with the aperture in the first disk to permit dispensing of the contents or moved out of alignment therewith to close the container. Numerous methods have been utilized for maintaining the inner or first disk in position in the container and these methods have included rolling a bead into a wall of the container to secure the inner disk in place and in one of the more popular of these containers now in use a separate sleeve is provided within the container to support the inner disk therein. Both of these methods are relatively costly and accordingly, any method which will satisfactorily secure the inner disk in place and at a lower cost represents a material step forward in the art.

It is accordingly the object of this invention to provide a method of making a disposable dispensing container of the type including a cylindrical body having a more or less conventional dispensing top including an inner disk fixed in the container and an outer rotatable disk which method serves to secure the inner and outer disks in position in the body of the container while eliminating the need for utilizing a supporting sleeve within the container, or a bead rolled in the side wall of the container.

A further object of the invention is the provision of a method of making a disposable dispensing container of the type including a cylindrical body having a more or less conventional dispensing top including an inner disk fixed in the container and an outer rotatable disk, such method serving to eliminate certain components heretofore necessary in this type of container and also serving to reduce the number of assembly steps to a minimum.

Further objects and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawings wherein:

FIGURE 1 is a longitudinal sectional view showing the first step in the method of this invention;

FIGURE 2 a longitudinal sectional view showing the second step in the method;

FIGURE 3 a longitudinal sectional view showing the third step in the method;

FIGURE 4 a longitudinal sectional view showing the container and closure after the third step of the method and also showing in elevation a glue applying head prior to insertion of the head into the container;

FIGURE 5 a longitudinal sectional view showing the manner of inserting the glue applying head into the container and also the step of applying the glue at spaced locations around the periphery of the inner disk comprising a portion of the dispensing closure; and

FIGURE 6 a sectional view taken substantially on the line 6—6 of FIGURE 5 and showing the dispensing closure in the container after completion of the method of this invention.

With continued reference to the drawing, and particularly FIGURES 5 and 6, the dispensing container produced by the method of this invention may well comprise an elongated tubular cylindrical body **10** which may be of cardboard, plastic or any other suitable material in one end of which there is secured an inner disk **11** having an off-center dispensing aperture **12** therein with the inner disk **11** being secured in place in the body **10** by glue or other suitable adhesive applied at angularly spaced points **13** around the periphery of the disk **11** with the glue being applied to both the inner surface of the disk **11** and the side wall of the body **10** to fix the disk **11** in place therein.

An outer disk **14** is disposed in the body **10** outwardly of the inner disk **11** and while the inner disk **11** is a tight fit in the body **10** the outer disk **14** is a relatively loose fit in order that the same may be conveniently rotated within the body **10**. The outer disk **14** is retained in position in engagement with the outer surface of the inner disk **11** by an inwardly projecting bead **15** which may be formed by crimping the edge of the container body **10**. The outer disk **14** is also provided with an off-center dispensing aperture **16** and with a diametrically disposed finger engaging rib **17** which may be conveniently utilized for rotating the outer disk **14** to bring the aperture **16** therein into alignment with the aperture **12** in the inner disk **11** to permit dispensing of the contents of the container. If desired additional apertures **18** may be provided in the outer disk **14** as shown in dotted lines in FIGURE 6.

In carrying out the method of this invention, the first step thereof as shown in FIGURE 1 consists of disposing the body **10** of the container in a vertical position and inserting the tightly fitting inner disk **11** within the lower end of the container to a point spaced from the lower end **19** of the body **10**. If desired the inner disk **11** may be formed of cardboard, or other suitable material and such disk may be die-cut and simultaneously inserted into the container body **10**. The second step of the invention as shown in FIGURE 2 consists in inserting the outer loosely fitting disk **14** into the lower end of the container, outwardly of the inner disk **11** and in engagement with the outer surface thereof. The third step of the method as shown in FIGURE 3 consists of crimping at the lower end **19** of the container body **10** inwardly to provide an inwardly projecting bead **15** which engages the outer surface of the outer disk **14** adjacent to periphery thereof and operates to maintain the outer disk **14** in position in the body **10** while permitting rotation thereof with respect to the inner disk **11**.

With particular reference to FIGURES 4 and 5, there is shown a glue applying head **20** mounted on the lower end of a tubular member **21** which in turn is supported from a cross head or other suitable member **22** which may be operated to move the head **20** vertically into and out of the container body **10**. The particular apparatus utilized to operate the cross head **22** forms no part of the instant invention and consequently no shoring or de-

scription thereof is considered necessary since the same comprises a conventional, mechanical expedient. The glue applying head **20** is provided adjacent the periphery thereof with a plurality of angularly spaced nozzles or spray openings **23** through which glue may be ejected with a glue or other suitable adhesives being supplied to the head **20** through the tubular member **21**.

After completion of step 3 of the method as shown in FIGURE 3 the container body **10** together with the inner and outer disks **11** and **14** in position therein, is positioned below the glue applying head **20** and thereafter as shown in FIGURE 5 the glue applying head **20** is moved downwardly into the container body **10** into close proximity with the upper or inner surface of the inner disk **11** and at this time glue is ejected through the nozzles or aperture **23** in the head **20** onto the inner surface of the inner disk **11** at the inner surface of the side wall of the container **10** to apply such glue at angularly spaced points at around the periphery of the inner disk **11** as shown at **13** in FIGURES 5 and 6. If desired the glue applying head **20** may be moved into actual contact with the inner disk **11** to hold the same in firm engagement with the inner surface of the outer disk **14** during the operation of applying glue to the inner disk. The glue applied at space points **13** together with the bead **15** will operate to maintain the inner and outer disk **11** and **14** in position in the container body **10** with the outer disk **14** free to rotate to open or close the dispensing apertures.

After completion of the glue applying operation, the glue applying head **20** is, of course, moved upwardly out of the container body **10** and thereafter the container may be filled with the desired material and at the upper end thereof closed in any suitable or desirable manner.

It will be seen that by the above described invention there has been provided an extremely simple yet highly effective method of assembling a dispensing container of the type described and this method serves to eliminate the necessity for certain parts or elements heretofore utilized in containers of this type, and also operates to reduce the assembling operations and particularly any manual operations to a minimum, thereby contributing to the low cost of manufacture of the container.

It will be obvious to those skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore the invention is not limited by that which is shown in the drawing

and described in the specification, but only as indicated in the appended claims.

What is claimed is:

1. A method of making a dispensing container for fluent materials, said container including an elongated tubular cylindrical body having a closure at one end which may be opened or closed for dispensing the contents of said container, said method comprising the steps of disposing said body in a vertical position, inserting a tightly fitting inner disk having an off-center aperture therein into said body and positioning said disk in spaced relation to the lower end of said body, inserting a loosely fitting outer disk having an off-center aperture therein into the lower end of said body in engagement with the outer surface of said inner disk, crimping the lower end of said body inwardly to provide a bead engaging said outer disk to retain the same in said body, inserting a circular glue applying head into the upper end of said body to a point adjacent said inner disk, and ejecting glue from said head onto the inner surface of said inner disk and the side wall of said body at angularly spaced points, said glue and said bead serving to retain said disks in position in said body with said outer disk being rotatable to bring said apertures into alignment for dispensing the contents of said container.

2. A method as defined in claim **1** in which said inner disk is die-cut from a sheet of material and simultaneously inserted into said body.

3. A method as defined in claim **1** in which the glue is applied at four angularly spaced points around the periphery of said inner disk.

4. A method as defined in claim **1** in which said glue head is moved into engagement with said inner disk to hold said inner and outer disks in engagement with said bead prior to and during application of the glue.

References Cited by the Examiner

UNITED STATES PATENTS

2,805,005	9/1957	Kappler	222—480
2,832,514	4/1958	O'Connor	222—480
3,015,884	1/1962	Chamberlain	29—432

FOREIGN PATENTS

615,329	1/1949	Great Britain.

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