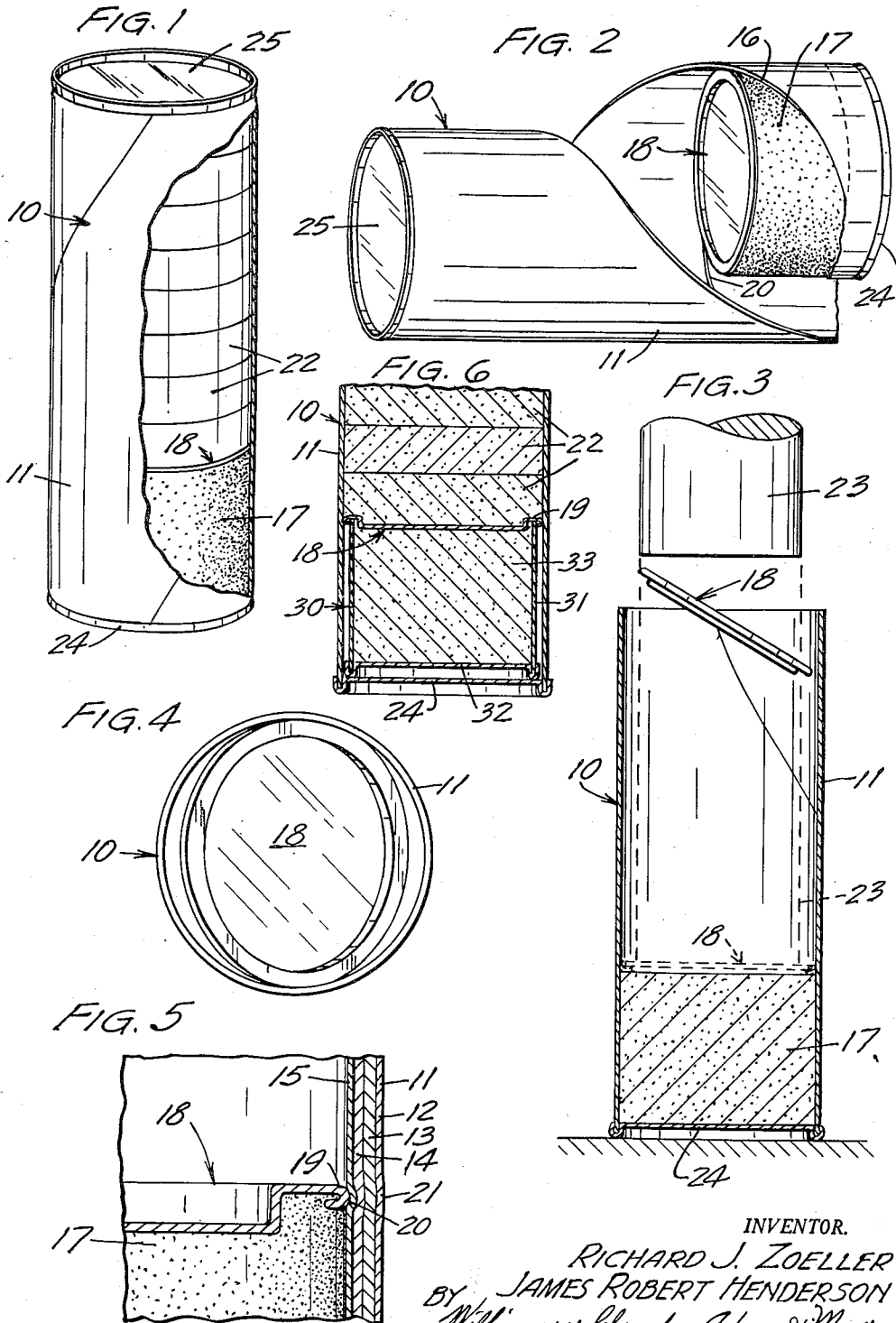


Aug. 16, 1960

R. J. ZOELLER ET AL
COMPARTMENTED DOUGH PACKAGE

2,949,369

Filed Oct. 29, 1956



INVENTOR.

RICHARD J. ZOELLER
JAMES ROBERT HENDERSON
BY *Williamson, Schroeder, Adams & Meyers*
ATTORNEYS

1

2,949,369

COMPARTMENTED DOUGH PACKAGE

Richard J. Zoeller and James R. Henderson, Louisville, Ky., assignors to The Pillsbury Company, a corporation of Delaware

Filed Oct. 29, 1956, Ser. No. 619,041

2 Claims. (Cl. 99—172)

This invention relates to packaging containers and more specifically relates to multi-compartment cans for packaging separate portions or ingredients which are to be used together in producing a finished product, and to methods of producing and filling multiple compartments in a can.

When food products such as biscuits and the like are made ready for consumption, it is oftentimes desirable that such biscuits be provided with a topping or frosting. Such biscuits are frequently supplied to the consumer in ready-to-bake condition and such ready-to-bake biscuits and the like are commonly packaged and shipped and sold in cheap and readily openable containers such as cans. Heretofore it has been found to be impractical in many cases to apply the topping or frosting on each individual biscuit before the biscuits are packaged in such cans. However, it is highly desirable that a well prepared topping or ingredient therefore be supplied with the biscuits so that the consumer may readily and easily apply the topping to the biscuits at the time the biscuits are being prepared for consumption. Although certain multi-compartment containers or cans have been heretofore known, the can construction, so as to provide separate compartments therein, has been so elaborate and expensive as to make the cost of the can prohibitively high in relation to the price which consumers are willing to pay for the food product, that the utilization of such multicompartment containers has been impractical for storing and selling food products such as biscuits and the like, which should be relatively cheap.

An object of our invention is to provide a new and improved multi-compartment container of extremely simple and inexpensive construction and fabrication for storing and restricting comingling of different ingredients or portions of a finished product, which ingredients or portions are to be used together by the consumer to produce such a finished product.

Another object of our invention is to provide a novel multi-compartmented container for packaging different portions or ingredients of a finished product, which container is formed of an inexpensive, substantially conventional container of the type now in common use for packaging similar products.

Still another object of our invention is the provision in a substantially conventional can of well known type for packaging food products, of a moisture-sealing divider wall between different portions of the can so as to facilitate packaging in the can different ingredients of the finished product to be produced, wherein certain of said ingredients contain substantial moisture and wherein other of the ingredients are to be maintained in a relatively dry condition.

A further object of our invention is to provide in a can of a conventional type used for packaging biscuits and the like, of a readily emplaceable divider wall to produce compartments sealed from each other in such a manner as to restrict and substantially prevent any moisture or product ingredient migration from one com-

2

partment to the other, even where substantial internal pressure may be developed in one of the compartments.

A still further object of our invention is the provision of a multi-compartmented can which is constructed to seal the can compartments from each other and which is also constructed to permit ready and easy access into all of the can compartments so as to facilitate quick and substantially effortless removal of the contents of the compartments.

A still further object of our invention is the provision of a novel method in the art of producing and filling multiple compartments in the interior of an open-topped fibre board can, which facilitates the utilization of conventionally styled cans and which facilitates sealing of one substance from another at a particular location in the can which is independent of the can construction and which is in relation to the quantity of one of the substances to be contained in the can.

These and other objects and advantages of our invention will more fully appear from the following description made in connection with the accompanying drawings wherein like reference characters refer to the same parts throughout the several views and in which:

Fig. 1 is a perspective view of the multi-compartmented container with a portion of the side wall broken away to show the general internal arrangement of a closed can;

Fig. 2 is a perspective view of the can, showing the manner in which the can is opened to provide ready and easy access to the contents of the compartments;

Fig. 3 is a vertical section view of the can showing the manner in which the can is filled and also showing the manner in which the compartment defining divider wall is inserted into the can;

Fig. 4 is a top plan view of the open-topped can shown in Fig. 3; and

Fig. 5 is a greatly enlarged detail view in vertical section of the can side wall and compartment-defining divider wall when the divider wall is properly seated in the can.

Fig. 6 is a vertical section view of a modified form of a multi-compartment can embodying the present container.

One form of the present invention is shown in the drawings and is described herein. The container or can, indicated in general by numeral 10 is of a substantially conventional construction having a laminar fibre board sidewall 11 which is best seen in Fig. 5 and which includes an outer wrapper lamination 12, a pair of kraft fibre board laminations 13 and 14 respectively and a metallic foil lining 15. The sidewall 11 of the can is circumferentially dispartable along an elongated zone or line substantially at 16 as indicated in Fig. 2, which extends spirally around the can sidewall and toward opposite ends thereof. To facilitate such circumferential disparting along such a zone or line, the can sidewall may be constructed in any suitable manner such as that specifically set forth in application for United States Letters Patent S. N. 360,658, filed June 10, 1953, William M. Geist, inventor, now abandoned, but it should be understood that the manner of providing for the circumferential disparting should not be limited to that shown in the identified application.

As the can is being filled, one substance 17 which may comprise a relatively dry topping or frosting material for biscuits and the like, is inserted into the bottom of the can interior. A divider wall 18 is then inserted into the can interior through the open upper end thereof, substantially as shown in Figs. 3 and 4 and the divider wall 18 is subsequently moved downwardly into the can interior to the dotted position shown in Fig. 3. Divider wall 18 is circular to be of complimentary shape in rela-

tion to the transverse configuration of the interior chamber defined by the can sidewall 11. As best seen in Fig. 5, the peripheral edge 19 of divider wall 18 is smoothly rounded to facilitate ready and easy sliding of the divider wall 18 down into the can interior without tearing or otherwise damaging the foil lining 15 of the side wall 11. In the form shown, the divider wall 18 is provided with a beaded edge 19. The divider wall 18, when seated, is disposed transversely of the interior chamber of the can and intermediate the ends of the elongated circumferentially dispartable zone or line 16 and is disposed in overlying engagement with the first substance or topping 17 in the bottom portion of the can interior. The outer peripheral edge portion 19 of divider wall 18 is embedded into the yieldable and somewhat elastic sidewall 11.

The interior surface of the can sidewall is smooth before the divider wall 18 is inserted, and as the divider wall 18 is moved into the proper position in the can and is disposed normal to the axis of the can, the peripheral edge 19 forms a shallow groove 20 in the foil lining 15 which is deformed or crimped by the edge 19. The kraft fibre board laminations 13 and 14 are compressed, and only a very slight bulge is visibly perceptible at 21 on the exterior surface of the can sidewall. The embedding of the divider wall into the can sidewall 11 produces a sealing relation between the divider wall and the can sidewall and migrating of the different substances 17 or 22 on opposite sides of the divider wall respectively, and migrating of moisture, from one of the compartments to the other of the compartments is prevented. The substance 22 which is placed in the can above the divider wall 18 may be ready-to-bake biscuit dough or the like which may contain a substantial quantity of moisture and which will develop a substantial internal pressure above the divider wall in the can. In spite of this pressure created by the biscuit dough, the seal between the compartments in the can provided by the divider wall restrains migration of moisture and dough material between the compartments. The divider wall 18, which is inserted into the can after a quantity of one substance 17 is inserted into the bottom of the can interior, is inserted in an inclined position, substantially as shown in Figs. 3 and 4 into the top of the can and a ram 23 will then be driven downwardly into the can interior, driving the divider wall 18 before it. As the divider wall 18 is initially inserted into the can, the sidewall 11 is slightly deformed by the oversize divider wall and will be somewhat elliptically shaped to permit the divider wall to be moved downwardly thereinto.

It has been found that it is preferable that the exterior diameter of the divider wall 18 be approximately 0.005 inch larger than the inside diameter of the cylindrical can sidewall. However, it has been found that there is no dough extrusion or migration around the divider wall 18 if the diameter of the divider wall 18 is 0.002 inch larger than the interior diameter of the can sidewall. Because the can has a cylindrical sidewall it has been found to be important that the divider wall be exactly circular, and the divider wall should be circularly formed within close tolerances with respect to different diametric measurements thereof.

Of course it should be understood that the bottom cover 24 is applied to the end of the sidewall thereof before filling commences and the top cover 25 is applied to the top open end of the sidewall after the different substances have been inserted into the can.

It has been found that, at least in the storing of carmel nut topping, as the substance 17 in the can, and which is of relatively dry nature, the topping, although of granular form, will form itself into a cohesive mass after being placed in the can. This cohesive mass has been found to be of such a nature that it may be easily crumbled for applying to the biscuits. When the container is to be opened so as to prepare the biscuits and topping

or other substances stored in the can, for use, the can sidewall is circumferentially split or disparted along the spiral line 16 and the biscuits will readily fall out. When the sidewall 11 is circumferentially disparted, portions of the sidewall pull away from the divider wall or separator 18 and access is provided to the substance or topping 17 to facilitate ready and easy removal thereof.

It should be noted that one of the particular advantages of the present multi-compartment can is that the divider wall 18 may be positioned in any desired location, dependent upon the size of compartments desired. For instance, if only a small quantity of substance 17 is to be supplied, the perscribed quantity may be inserted into the can interior and the divider wall may be applied directly on top of that quantity. It will therefore be seen that the present multi-compartmented can is exceedingly versatile in its usage and may be used in packing a number of different substances.

The form of the invention shown in Fig. 6 includes the can 10 shown in Figs. 1-5 and has the same type of sidewall 11, and a bottom cover 24. A can or receptacle 30 is placed in the compartment defined by wall 11 and has a peripheral sidewall 31 which is slightly smaller in diameter than the internal dimensions of the sidewall 11. The receptacle or can 30 has a bottom cover 32 which is crimped to the lower peripheral edge of sidewall 31. The upper end 33 of can 30 is open. The divider wall 18 overlies the upper peripheral edge of side wall 31 and may be in sealing relation therewith. The peripheral edge portion 19 of divider wall 18 is embedded in the side wall 11 as hereinbefore described.

This form of the invention, is particularly well adapted for storing a somewhat fluid or pasty material such as icing of the type commonly used on rolls such as cinnamon rolls. The divider wall 18 prevents the material in the receptacle 30 from escaping therefrom and also prevents such material from comingling with the substances in the upper compartment of the can 10. Because the peripheral edge portion 19 of the divider wall 18 is embedded in the side wall 11, leakage into the upper container compartment is restricted and movement of the lower container 30 is prevented.

It will be seen that we have provided a new and improved multi-compartmented container which is constructed in such a manner to facilitate insertion of the substances into the can from one end thereof and which is also constructed in a manner as to seal the compartments and prevent comingling of one substance with the other.

It should further be noted that we have provided a novel and improved multiple compartment can which is constructed in such a manner that the substances contained in the compartments are separated by a moisture seal and in such a manner that ready and easy access is provided into the several compartments to facilitate easy removal of the contents of each of the compartments.

It should also be noted that we have provided a new and improved method in the art of producing and filling multiple compartments in a substantially conventional fibre board can whereby the compartments are formed as the can is being filled and the compartments are sized in relation to the quantity of substance placed therein.

It will, of course, be understood that various changes may be made in the form, detail, arrangement and proportion of the parts without departing from the scope of our invention which consists of the matter described herein and set forth in the appended claims.

What is claimed is:

1. A dough product package, comprising a container, a quantity of expansible dough in the container, a quantity of substantially dry and packed edible material in the container and segregated from the dough, a moisture-imperious and circular divider wall in the container and positioned between the dough and dry material, said

5

container including a cylindrical side wall constructed of kraft board material, said side wall having an elongated and circumferentially dispartable zone extending toward the opposite ends thereof from said divider wall, a metallic foil lining on the inner surface of said side wall, rigid covers crimped on the ends of the side wall, the side wall encompassing the divider wall and said foil lining slidably engaging and being crimped around the entire periphery of the divider wall, whereby to prevent migration of moisture from the dough to the dry material and to permit ready and easy access through the can side wall to the dough and dry material.

2. The invention as set forth in claim 1 wherein said dispartable zone extends spirally around the side wall and toward the opposite ends thereof whereby to facilitate opening of the can along the dispartable zone by twisting the opposite ends of the side wall relative to each other, and thereby causing the side wall to pull away from the divider wall.

References Cited in the file of this patent

UNITED STATES PATENTS

1,514,379 Fleischer Nov. 4, 1924

20

1,744,973
1,754,524
1,801,921
1,889,883
1,936,417
2,287,610
2,423,224
2,510,211
2,652,148
2,734,625
2,756,924
2,772,171
2,793,126
2,793,127
2,800,267

5

10

15

6

Kuechenmeister Jan. 28, 1930
Porter Apr. 15, 1930
Hollis Apr. 21, 1931
Woods Dec. 6, 1932
Ware Nov. 21, 1933
Guidry June 23, 1942
Card July 1, 1947
Cleary June 6, 1950
Pfeifer Sept. 15, 1953
Nelson Feb. 14, 1956
Abrahamson July 31, 1956
Montminy Nov. 27, 1956
Fienup et al. May 21, 1957
Geist et al. May 21, 1957
O'Neil July 23, 1957

OTHER REFERENCES

Bakers Weekly, March 6, 1950, page 16.