

July 29, 1952

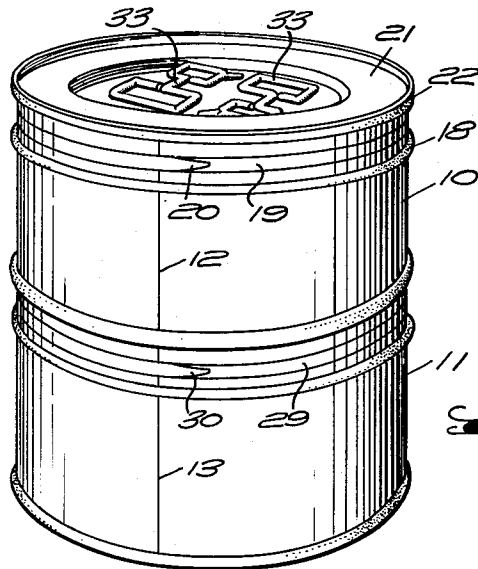
S. RUBENSTEIN

2,605,013

MULTIPLE COMPARTMENT CAN

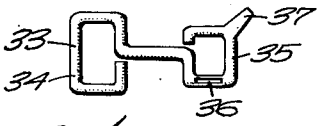
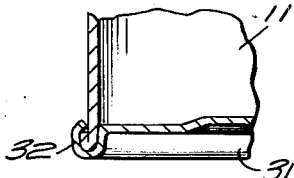
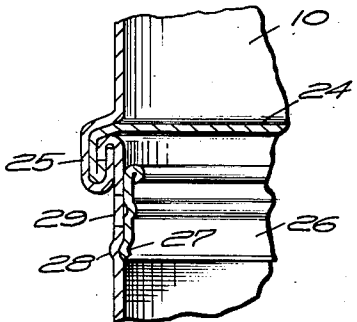
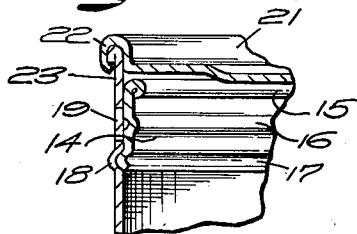
Filed Dec. 6, 1947

2 SHEETS—SHEET 1

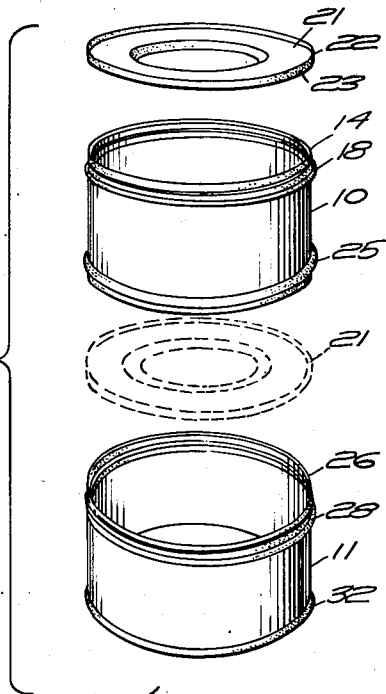


*Fig. 1*

*Fig. 2*



*Fig. 4*



*Fig. 3*

Inventor

*Solomon Rubenstein*

By *Max Schwartz*  
Attorney

July 29, 1952

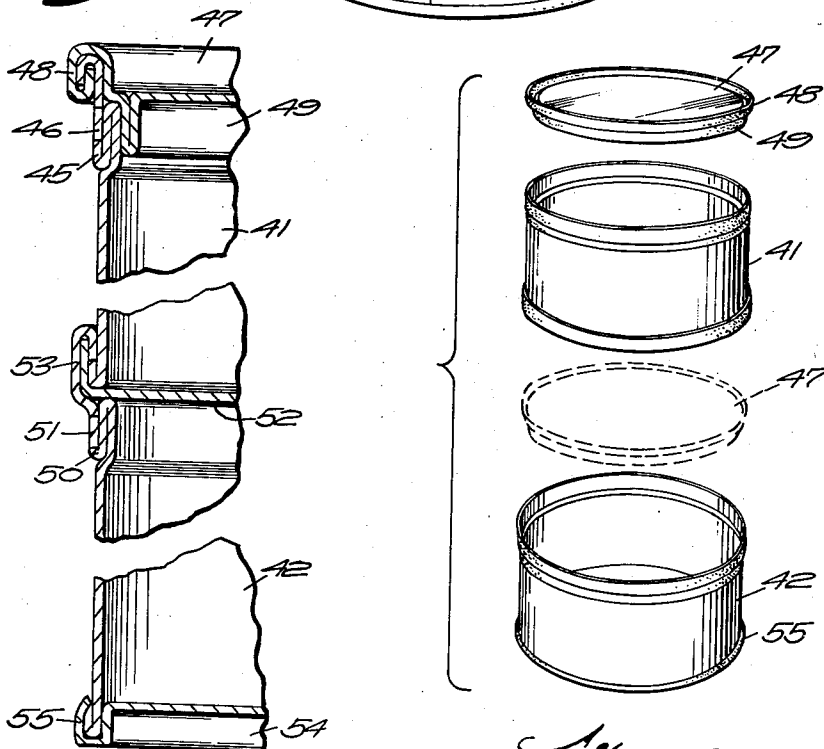
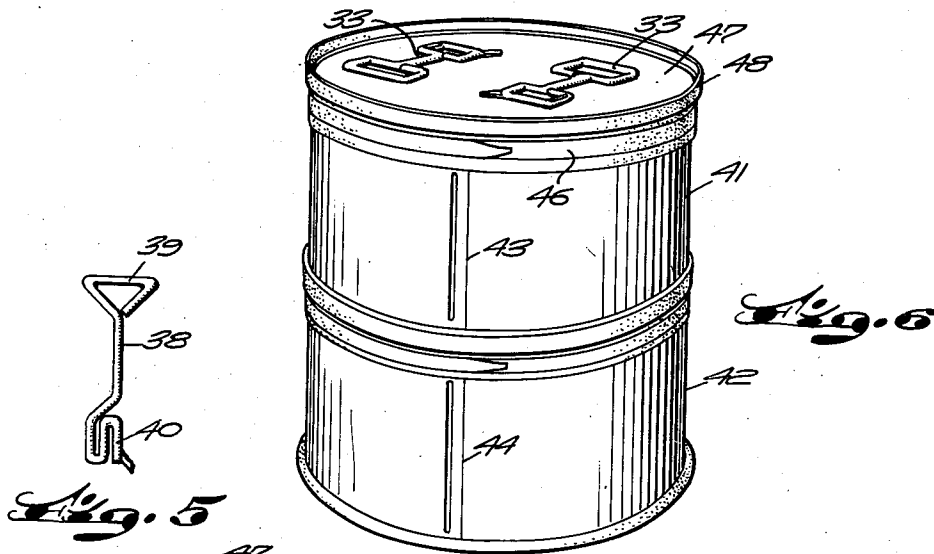
S. RUBENSTEIN

2,605,013

MULTIPLE COMPARTMENT CAN

Filed Dec. 6, 1947

2 SHEETS—SHEET 2



Inventor

**Solomon Rubenstein**

*Max Schwartz*  
Attorney

## UNITED STATES PATENT OFFICE

2,605,013

## MULTIPLE COMPARTMENT CAN

Solomon Rubenstein, Providence, R. I.

Application December 6, 1947, Serial No. 790,183

2 Claims. (Cl. 220-20)

1

My present invention relates to sheet metal containers and more particularly to a sheet metal container having a plurality of sealed compartments.

The principal object of the present invention is to provide a container having a plurality of hermetically sealed sections.

A further object of the present invention is to provide a container having a plurality of compartments which can be removed and discarded as each is emptied.

Another object of the present invention is to provide a multiple compartment container which is simple in construction and easy and economical to manufacture and assemble.

With the above and other objects and advantageous features in view, my invention consists of a novel arrangement of parts, more fully disclosed in the detailed description following, in conjunction with the accompanying drawings, and more particularly defined in the appended claims.

Referring to the drawings illustrating my invention,

Fig. 1 is a perspective view of a can embodying my invention;

Fig. 2 is an enlarged sectional view, partially broken away, showing the wall construction;

Fig. 3 is a perspective view showing the compartments in separated relation;

Fig. 4 is a plan view of one form of key for opening the can;

Fig. 5 is a plan view of another form of key;

Fig. 6 is a perspective view of an alternative form of can embodying my invention;

Fig. 7 is an enlarged sectional view, partially broken away, showing the wall construction of the same; and

Fig. 8 is a perspective view of the same showing the compartments in separated relation.

In packing coffee and similar products, it is customary to vacuum pack them in a sheet metal can. The difficulty arises when the consumer opens the can and exposes the contents to the atmosphere. The aroma and flavor deteriorate before the contents are consumed. To overcome this difficulty, it has been proposed to provide the container with two or more compartments so that a portion only of the contents are exposed at one time. However, the resultant container is bulky, unwieldy, and difficult and expensive to manufacture and assemble.

The present invention is designed to overcome these defects by providing a multiple compartment can of simple construction which has a

2

single cover for all the compartments, and which permits the removal and disposal of the empty compartments in turn without affecting the remaining compartments. For purposes of illustration, I have shown my present invention as applied to a two compartment can, it being understood that it can similarly be applied to cans with three or more compartments. Figs. 1 to 3 shows an embodiment wherein the cover embraces the walls of the can, and Figs. 6 to 8 wherein the cover fits into the walls.

Referring more in detail to the drawings illustrating my invention, the can shown in Fig. 1 comprises tubular, sheet metal, body portions 10 and 11 in the form of cylindrical shells seamed, as at 12 and 13. The upper edge of the portion 10 is constructed and closed in the conventional manner, Figs. 1 and 2. A band 14 is inserted below the upper edge and is provided with a rolled top edge 15, a stiffening bead 16, and a lower bead 17 which projects and locks into a bead 18 formed in the body portion 10. The outer wall 10 is scored in the conventional manner, as at 19, adjacent the band 14, to provide a tearing strip which can be twisted off with a key starting at the tongue 20.

The upper end of the can is closed by a closure member 21, its perimeter crimped over the top edge of the portion 10 to form a seam 22. When the portion 19 is removed with a key, a portion of the body 10 remains attached to the cover 21 to form a depending flange 23. In using the cover, the flange 23 slides over the inserted band 14 to hold the cover in place.

The portions 10 and 11 are joined as shown in Fig. 2. A separating plate 24 forms the bottom of the upper compartment and its edge is crimped together with the lower edge of the portion 10 and the upper edge of the portion 11 to form a seam 25. Directly below the seam 25, a band 26 is inserted, similar to the band 14, and having a bead 27 locking into a bead 28 in the body portion 11. Between the bead 28 and seam 25, the portion 11 is scored to form a tearing strip 29 having a starting tongue 30.

The bottom 31 is attached similarly to the top 21, its edge being crimped over the bottom edge of the portion 11 to form a seam 32. The seams 22, 25 and 32 may be further sealed with a suitable rubber or plastic sealing compound, if desired.

In use, the plate 24 divides the can into a plurality of individually sealed compartments. When the strip 19 is removed, only the contents of the upper portion 10 are exposed to the air.

3

When this is empty, the strip 29 is torn off. This will separate the upper and lower portions, Fig. 3, and open the lower portion. The upper portion can now be discarded and the cover 21 will fit over the band 26 and serve as the cover for the lower, remaining portion of the can.

By adding as many separating plates as desired, and with the construction illustrated, as many compartments as required may be provided in a single can. The intermediate seam 25 strengthens the can and permits the use of thinner sheet metal in the body portions, thus saving weight and cost. In addition to preserving the contents, such a container can be used to package different food mixtures such as chow mein in one section with the dried noodles in the other section.

The conventional keys for opening vacuum cans usually comprise a handle and straight shank having a slot for engaging the starting tongue. The narrow hub provided by this key requires many turns before the strip is removed, and the strip has a tendency to slip off before the can is opened. Furthermore, this type of key is somewhat awkward to use on the intermediate strip 29. I therefore provide keys having wide hubs on which to wind the strip with less turns to prevent slipping. The key 33, Fig. 4, has a handle portion 34 and an integral rectangular portion 35 with a slot 36 adjacent one edge to engage the starting tongue. An extending tab 37 serves to attach the keys to the cover 21 in the usual manner. Two keys are required, one for each strip 19 and 29.

The key 38, Fig. 5, is simpler in construction, a wire being bent to form the handle portion 39 and the opposite end being twice reentrantly bent to form the double slotted portion 40 for engaging the tongues. Either key provides the necessary wide hub for stripping the portions 29.

In Figs. 6 to 8 I have illustrated my invention as applied to the type of can wherein the cover fits inside of the body of the can, thus eliminating the inserted bands. Referring to Figs. 6 to 8, the can comprises body portions 41 and 42 of tubular sheet metal seamed at 43 and 44 similarly to the can shown in Fig. 1. The upper edge of the portion 41 is reentrantly bent to form a triple fold 45. The outer layer of the fold 45 is scored to form the tearing strip 46 and extends upwardly to lock with the cover 47 at the seam 48.

The body of the cover 47 is bent downwardly to form a depending U-bend 49 which fits snugly behind the fold 45. It can thus be seen that when the strip 46 is removed, a double fold of material still remains of the original triple fold 45. The U-bend 49 slides behind this to permit the cover to seal the can without the use of an inserted band.

Where the portions 41 and 42 are joined, the upper edge of the portion 42 is first formed into a triple fold 50 similar to the fold 45 and having a scored tearing strip 51. A separating plate 52 is disposed between the portions 41 and 42 and serves as the bottom of the upper portion 41. The edge of the plate 52 is joined with the lower edge of the portion 41 and the upper edge of the portion 42 at a seam 53. Removing the strip 51 will thus separate the portions 41 and 42 and will permit the empty upper portion to be discarded as in the construction shown in Fig. 1. The bottom 54 is seamed to the bottom edge of the portion 42 at 55. When the portion 41 is discarded, the cover 47 is used on the remaining portion 42, the depending U-bend 49 fitting behind the fold 50.

4

The illustrated forms thus provide a multiple compartment can in which each compartment is removed and discarded in turn when empty, the single cover successively fitting the next succeeding compartment. The can is simple in construction and easy and economical to manufacture and assemble, the horizontal seams intermediate the upper and lower ends permitting the use of a comparatively thinner body metal than now in use on single type cans.

While I have described certain specific embodiments of my invention, it is obvious that changes may readily be made in the size, shape, and relative arrangement of parts, without departing from the spirit and scope of the invention as defined in the appended claims.

I claim:

1. A container comprising a tubular, sheet metal body portion, said body portion comprising a plurality of tubular members seamed together at their end edges, the lowermost of said tubular members having a bottom plate seamed thereto and the uppermost of said tubular members having a top plate seamed thereto, and a separating plate seamed into said body portion between said tubular members at their seamed end edges dividing the said body portion into a plurality of sealed compartments, said body portion being provided with an integral circumferential tear strip adjacent the upper edge of each of said tubular members permitting the release of the top of the container to form a cover and permitting the separation of the tubular members and their corresponding compartments from the container, each of said compartments having an internal circumferential lip portion extending upwardly beyond the lower edge of the tear strip, said lip portions being of equal diameter, whereby said cover will fit over the lip portion on the uppermost compartment and will fit over the next uppermost compartment to form a cover therefor after the uppermost compartment has been removed from the container.

2. A container comprising a tubular, sheet metal body portion, said body portion comprising a plurality of tubular members seamed together at their end edges, the lowermost of said tubular members having a bottom plate seamed thereto and the uppermost of said tubular members having a top plate seamed thereto, and a separating plate seamed into said body portion between said tubular members at their seamed end edges dividing the said body portion into a plurality of sealed compartments, said body portion being provided with an integral circumferential tear strip adjacent the upper edge of each of said tubular members permitting the release of the top of the container to form a cover and permitting the separation of the tubular members and their corresponding compartments from the container, each of said compartments having an integral internal circumferential lip portion extending upwardly beyond the lower edge of the tear strip, said lip portions being of equal diameter, whereby said cover will fit over the lip portion on the uppermost compartment and will fit over the next uppermost compartment to form a cover therefor after the uppermost compartment has been removed from the container.

SOLOMON RUBENSTEIN.

(References on following page)

## 5

## REFERENCES CITED

The following references are of record in the file of this patent:

## UNITED STATES PATENTS

Number	Name	Date
687,654	Rubin	Nov. 26, 1901
1,823,068	Stollberg	Sept. 15, 1931
1,880,250	Hopkins	Oct. 4, 1932
2,052,475	Jones et al.	Aug. 25, 1936
2,073,636	Holoubek	Mar. 16, 1937
2,326,191	Zabler	Aug. 10, 1943

Number
2,327,412
2,333,841
2,355,108
2,371,173
2,375,621
2,488,528

Number
582,306

## 6

Name	Date
Fink	Aug. 24, 1943
Bugge	Nov. 9, 1943
Reese	Aug. 8, 1944
Hothersall	Mar. 13, 1945
Burns	May 8, 1945
Erb	Mar. 22, 1949

## FOREIGN PATENTS

Country	Date
Germany	Aug. 12, 1933