

Oct. 4, 1955

G. MEYER-JAGENBERG
CONTAINER WITH RIP-OPEN FLAP

2,719,663

Filed July 26, 1950

2 Sheets-Sheet 1

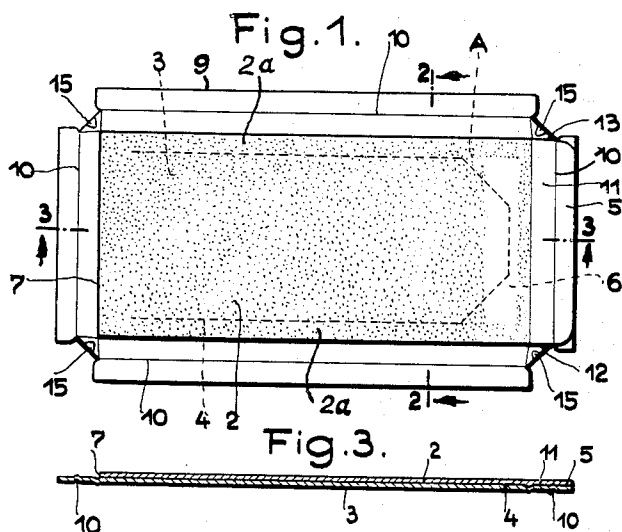
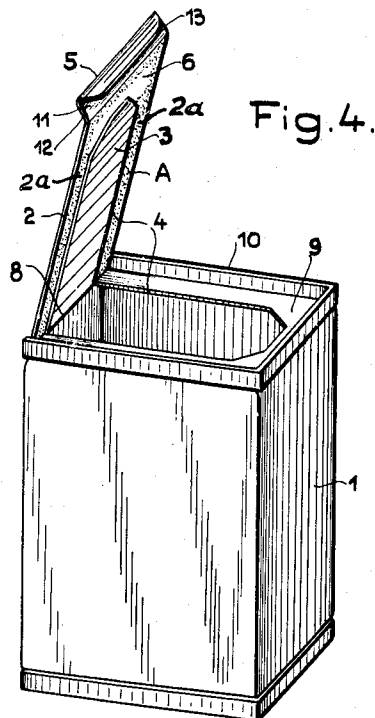
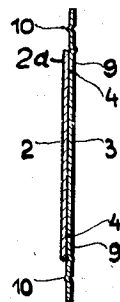


Fig. 2.



INVENTOR
GUNTHER MEYER-JAGENBERG
BY

John H. Wiley

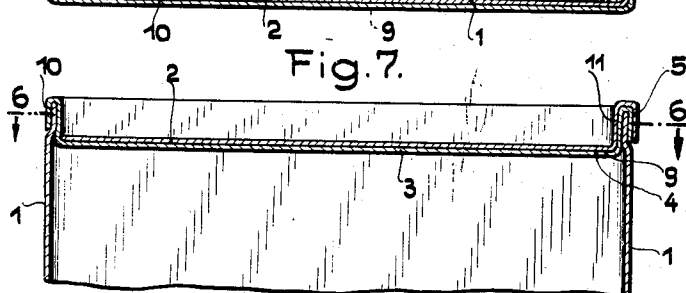
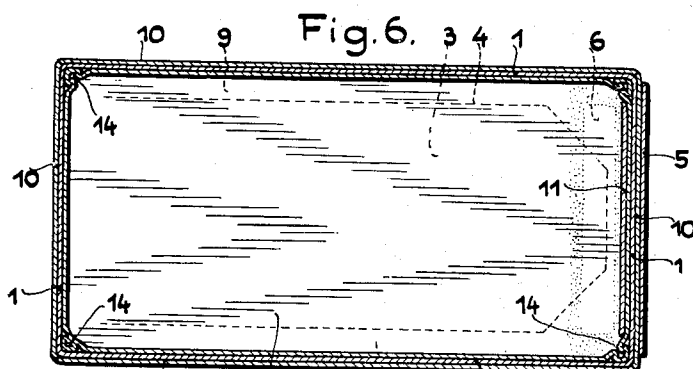
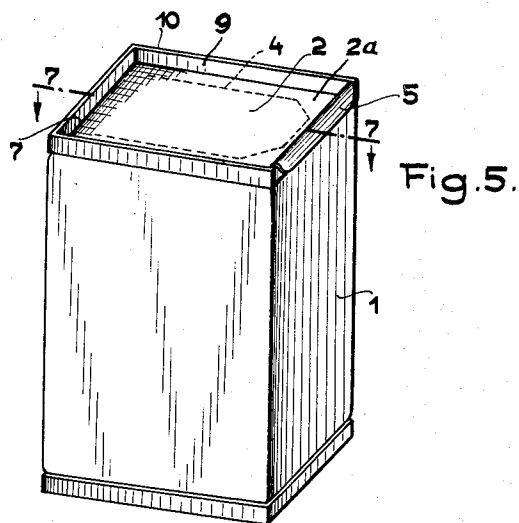
Oct. 4, 1955

G. MEYER-JAGENBERG
CONTAINER WITH RIP-OPEN FLAP

2,719,663

Filed July 26, 1950

2 Sheets-Sheet 2



INVENTOR
GUNTHER MEYER-JAGENBERG
BY

Muri & Hilkey

2,719,663

CONTAINER WITH RIP-OPEN FLAP

Günther Meyer-Jagenberg, Dusseldorf, Germany, assignor of one-half to Jagenberg-Werke Akt. Ges., North Rhine County, Germany

Application July 26, 1950, Serial No. 175,963

Claims priority, application Belgium August 3, 1949

1 Claim. (Cl. 229—7)

This invention relates to an airtight and waterproof container of cardboard, paper or the like, preferably of a multi-angular section, with a rip-open flap adhesively secured to the container wall and overlying an aperture flap prepared in the container wall.

There are paper containers known in which the discharge aperture, placed independently of the filling aperture, is formed by a flap cut or perforated in the container wall. This aperture flap is covered, in the containers known, by a rip-open flap which is firmly connected to the container wall as well as to the aperture flap by a stencil-coating of adhesive in such a way that in loosening the rip-open flap from the container wall, the aperture flap, connected to the rip-open flap by an adhesive, is simultaneously raised in releasing the discharge opening. The incised edges of the aperture flap are not bounded therewith by the gluing action, since the area of adhesive of the rip-open flap only corresponds approximately to the size of the aperture flap connected to it, and the rip-open flap is merely attached to the container wall by a narrow strip of edge gluing.

In this known kind of discharge opening, the cut edges of the aperture flap are only connected to the corresponding edges of the container walls by the impregnating substance that has penetrated into the incision slit during the coating operation on the container, so that this connection may easily be loosened by a slight pressure or impact, with the result of a leakage of the container.

Moreover, this container is poorly suitable for a reclosure in the case of a merely partial discharge of the contents, as the edge around which the rip-open flap moves during the opening operation, runs at a certain distance from the rear edge of the rip-open flap, so that this edge, broken in opening, lifts the flap from the discharge aperture and will reclose the latter only in part when the container is reclosed.

In order to do away with these drawbacks, a container according to the invention is developed in such a manner that the adhesive securing the rip-open flap to the container wall extends beyond and completely around the edge of the aperture flap, cut in the wall of the container, in order to firmly apply the aperture flap again to the adjacent parts of the container wall by means of the rip-open flap lying above it, thus preventing an unintentional loosening of the aperture flap from the container wall.

Moreover, a container according to the invention is characterized by an area left free of an adhesive on the rip-open flap, which area interrupts the adhesive coating, surrounding the cut edges of the aperture flap, in that place in which the discharge opening becomes free first of all when the rip-open flap is raised. Hereby the opening of the container will be facilitated in so far as the front edge of the aperture flap, stretching vertically to the tearing-open direction, is not glued up by the adhesive having entered the incision slit, resisting thereby

to the loosening of the aperture flap from out the container wall and to possibly causing a laceration close to the cut edges.

The pivot line of the rip-open flap, around which the flap turns when the container is being opened, lies in the height of the rear edge of the rip-open flap which, in its turn, coincides with an adjacent container edge. In this manner, a crease line, existing already in the container wall, is used as a hinge, whereby an easy play of the flap is obtained and the reclosed flap remains in its position of a complete closure cover of the discharge opening.

Another possibility of use of the rip-open flap according to the invention results from the arrangement of the flap on the top cap of a container, into the body of which the cap is inserted in such a way that its flanges, directed outwardly and vertically to the surface of the lid, tightly fit to the inside edges of the container body or enclose them in the shape of a U. This form of embodiment renders feasible an especially effective reclosure, as the flanges embracing the upper edges of the container body and which, in the inserted top cap, form a right angle with regard to the face of the cap, lock the rip-open flap, adhesively secured to the surface plane of the cap.

This clamping effect is still further augmented by an extension of the rip-open flap, corresponding to the height of the adjacent flanges, to which extension adheres a flap to be grasped when the container is to be torn open. This extension, which is as broad as the rip-open flap, will be erected, when the top cap is being inserted into the body of the container, together with the adjacent flange, and will be locked then with its side edges into the corners of the container formed by the flanges. The material accumulations created in these corners while inserting and pressing the end caps, causes, of course, a slight diminution of the clearance of the opposed flanges within the corners, which clearance holds the rip-open flap in place in the reclosed container, that is in its closing position that covers the total discharge opening.

The rip-open flap, thus locked from all sides, represents, after a partial discharge of the contents, a relatively tight closure which sufficiently protects the remaining contents from external influences and which also preserves from spoiling, for a limited time, contents provided for an early consumption.

The material of which the rip-open flap is made, is, according to the invention, thicker than of the container walls. Owing to this fact, the rip-open flap, in conjunction with the discharge-aperture flap attached to its lower side by means of an adhesive, becomes a rigid lid which remains flat even after opening the container and which, for its part, offers a sufficient resistance to the locking operation by the cap flanges for securing a tight reclosure. Moreover, the hinged lid remains sufficiently flat to cover, by its own weight, the discharge aperture lying beneath it.

The container according to the invention will herein-after be described:

Figure 1 is a top plan view of a container top provided with a rip-open flap according to the invention;

Figure 2 is a cross-sectional view corresponding to line 2—2 of Figure 1;

Figure 3 is a cross-sectional view corresponding to line 3—3 of Figure 1;

Figure 4 is a view in perspective of a container incorporating the top shown in Figure 1 and having been opened.

Figure 5 is a view in perspective of a container as shown in Figure 4 but with the top in closed position;

Figure 6 is a cross-sectional view corresponding to line 6—6 of Figure 7, and

Figure 7 is a fragmentary cross-sectional view corresponding to line 7—7 of Figure 5.

In the embodiment of the invention illustrated, the

3

container comprises a rip-open flap 2 provided on the container top wall, overlies the aperture cover 3 cut in and integral with the container wall 9, wherewith the edge portions 2a of the rip-open flap extend beyond the cut edges 4 of the aperture flap 3. The coating of adhesive A connects the discharge-aperture flap 3 with the lower surface of the rip-open flap 2; moreover, the edge portions 2a of the flap 2 projecting beyond the aperture flap 3, will be firmly attached to the wall 9 of the container 1. The incised edges 4 of the aperture flap will consequently be surrounded by the adhesive coating on all sides to positively seal the container, wherewith the adhesive having entered the incision slit forms an additional strengthening and packing of the joint.

The adhesive coating of the rip-open flap 2 shows an area 6, left free of adhesive but surrounded, for the rest, by such a coating. This spot 6, free of glue, interrupts the adhesive coating surrounding the cut edges of the aperture cover 3, while opening the container, and flap 2 loosens itself from the container wall 1. The cut edges 4, substantially running, in that place, in a vertical direction with regard to the ripping-open direction, would render much more difficult the opening operation by the rip-open flap 2 in the case of an uninterrupted adhesive coating and of the glue having entered then the incision slits; circumstances permitting, there might even occur lacerations of the cardboard or paper. The area 6, free of adhesive, will positively finish, along the incised edges 4, the severing of the aperture flap 3 without resistance.

The edge 7 of the rip-open flap 2, opposite to the end 5, to be grasped during the opening operation, coincides with the container edge 8 which, for its part, is produced by two container wall panels, formed around a crease line having already contributed to the shaping of the container body. This crease line constitutes the pivot of the combined rip-open and aperture flaps 2, 3, around which pivot the flaps turn when the container is being opened. Owing to this arrangement, the same crease line which had previously contributed to form the container, is now used once more as a hinge for the rip-open and aperture flaps 2, 3 when the container is to be opened or be closed.

The invention further comprises a container with a top cap 9 inserted into and closing the upper end of the container body 1, the flanges 10 of the cap being rectangularly erected with respect to the cap surface, and which flanges fit to the inner sides of the container-body borders in encompassing these in a U-like form. This example represents such a form of embodiment of the container corresponding to the invention as it is especially provided for such goods which are to be protected, after a partial discharge of the contents, against influences from outside by means of a reclosure.

The rip-open flap 2 extends over the whole level surface of the cap 9, and the flanges 10 are erected, when inserting the cap 9 into the container body, around the edges of the rip-open flap 2, so that the edges of this flap 2 are clamped by the flanges 10 of the cap 9, as illustrated in Figure 7, which surround them from all sides.

In order to further secure the reclosure, the rip-open flap 2 is provided with an extension 11, the length of which corresponds to the height of the flanges 10 and which extension raises itself, with the adjacent flange,

4

while inserting the cap 9 into the container body, where-with the side edges 12, 13 of the extension 11 lock themselves into the corresponding corners formed by the flanges 10. This locking effect is stronger in this place than at the remaining side edges of the rip-open flap 2, as, owing to the pressing operation exerted on the cap 9 while inserting it into the container body, material accumulations 14 (Figure 6) are created in the corners by the webs 15 (Figure 1) between the ends of the flanges 10, and these accumulations 14 form a strong wedging grip on the side edges 12, 13.

The rip-open flap 2 is made of a stronger material than the appertaining container wall 1, so that the rip-open flap 2, in conjunction with the aperture flap 3, and with the layer of adhesive between them, form a relatively rigid and firm lid that keeps its even form and positively pivots about the rear edge 7 of the rip-open flap 2 in the tearing open operation. Owing to the easy play of the hinged aperture shutter 2, 3 around its pivot line, in conjunction with its own weight and its flat form, it completely closes and covers the discharge aperture when it is closed. By locking the side edges of the flap 2 and extension 11 respectively between the flanges 10 and the accumulations 14 of the cap 9, an especially strong reclosure is secured.

What I claim is:

A container formed of sheet material, comprising a tubular body having upstanding side walls and a top recessed below the upper edges of said side walls to be surrounded by upstanding flanges, said top having an opening therein and a closure flap fitting in said opening, a sealing flap completely covering said top and closure flap and fitting against said flanges, said sealing flap being covered substantially throughout its underside with adhesive to be secured permanently to said closure flap and releasably to said top, said sealing flap having at its front an area free of but completely surrounded by adhesive, said area including and overlapping the front end of the closure flap, said sealing flap having an extension at its front for fitting against the adjacent upstanding flange with the ends of said extension nesting in the corners of said flanges, and a tab on said extension for fitting over said front flange to facilitate opening said sealing flap.

References Cited in the file of this patent

UNITED STATES PATENTS

1,498,218	Weis	June 17, 1924
1,987,545	Alexander	Jan. 8, 1935
2,146,226	Punte	Feb. 7, 1939
2,288,739	Peters	July 7, 1942
2,302,083	Wilcox	Nov. 17, 1942
2,323,505	Wilcox	July 6, 1943
2,330,840	O'Neil et al.	Oct. 5, 1943
2,343,222	Nelson	Feb. 29, 1944
2,437,114	Moore	Mar. 2, 1948
2,470,388	Ball	May 17, 1949
2,577,304	Brooks	Dec. 4, 1951
2,583,211	Fleming	Jan. 22, 1952

FOREIGN PATENTS

223,084	Switzerland	Aug. 31, 1942
58,091	Netherlands	Aug. 15, 1946