March 22, 1932. E. E. BARLOW 1,850,911

EASY OPENING CONTAINER

Filed Oct. 17, 1930

Fig. 1

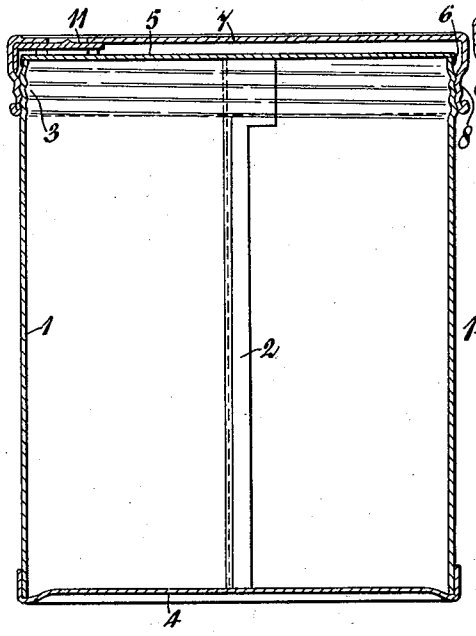



Fig. 2

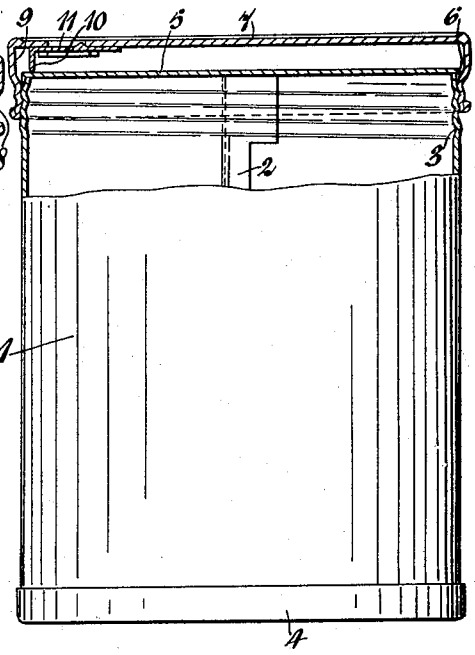



Fig. 3

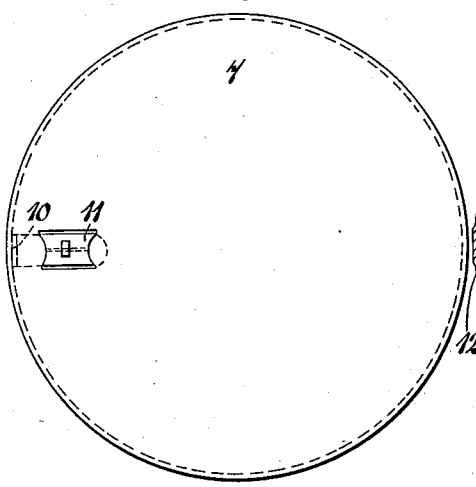
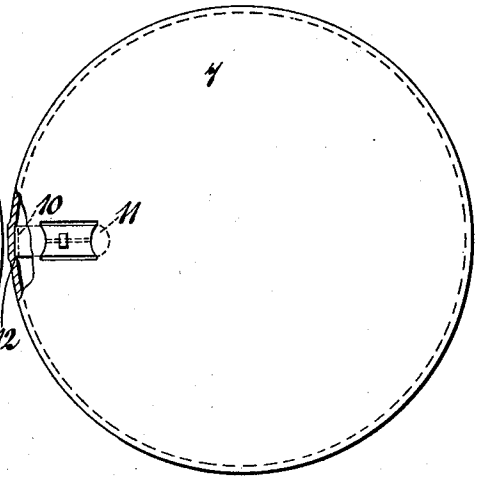



Fig. 4




INVENTOR
Ernest Edward Barlow
By Sturtevant, Mason & Porter
Attys.

Patented Mar. 22, 1932 1,850,911

# UNITED STATES PATENT OFFICE

ERNEST EDWARD BARLOW, OF LONDON, ENGLAND, ASSIGNOR TO CONTINENTAL CAN COMPANY, INC., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK

## EASY OPENING CONTAINER

Application filed October 17, 1930, Serial No. 489,392, and in Great Britain October 22, 1929.

This invention relates to easy opening containers having an inner and an outer closure, the inner closure of which is arranged to be severed by a cutting device associated with the outer closure.

An object of the invention is to provide a container of the above type described wherein the cutting device carried by the outer closure is normally disposed in a recess provided between the inner and outer closures when the container is sealed, and which may be shifted to a position so that the turning of the outer closure will cause said cutting device to positively pierce the inner closure and sever the same in a circular cut-out line.

In order that the invention may be clearly understood, reference is directed to the accompanying drawings, wherein:—

Figure 1 is a vertical section of an easy opening container tin constructed in accordance with the invention and showing a lid applied to such tin with a cutting device carried thereby, in the inoperative position.

Figure 2 is a part sectional elevation of an easy opening container tin similar to that illustrated in Figure 1, but showing the lid partly disengaged from the top of the tin and the cutting device in position ready to be applied.

Figure 3 is a plan view of the lid shown in Figure 1, and

Figure 4 is a plan view of a modified construction of lid.

The invention is directed broadly to an easy opening container which is provided with an inner and an outer closure, said outer closure having a cutting device associated therewith which may be used for removing the metal of the inner closure. The body portion of the container is cylindrical and has a bottom attached to it in any well-known manner. When the container is filled, the inner closure is attached to the upper end thereof so that a hermetic seal is established. The container is provided in the region of its upper end with screw threads. The outer closure is provided with a depending flange which is also provided with screw threads which are adapted to fit the threads of the body portion. The flange of the outer closure is bulged out in a portion of its skirt to form a recess between the outer and inner closures when the parts are assembled. Mounted upon the outer closure and adapted to normally lie within this recess is a cutting blade, and it will be readily seen that when the outer closure is tightly attached to the body portion, the cutting device will in no way come into contact with the inner closure. Upon unscrewing the outer closure and radially shifting the cutting device to a position where it will lie over a portion of the inner closure and then screwing the outer closure down upon its threads will now cause the cutting device to positively pierce the inner closure and sever the same in a circular cut-out line.

Referring to the drawings which illustrate an easy opening container comprising a cylindrical body portion 1 formed from a rectangular blank, the meeting edges of the said blank being connected by means of a longitudinal seam 2. One end of the cylindrical body 1 is provided with a screw-thread 3 and in order that the formation of the said thread may not be affected by the longitudinal seam, the meeting edges of the blank at that portion which is to be screw-threaded, are left unseamed and are over-lapped and soldered as illustrated in Figures 1 and 2 of the drawings.

The cylindrical body 1 is provided with a bottom member 4 which is secured thereto in the usual manner and an inner closure 5 is applied to the upper end of the body 1. The upper edge of the body is preferably reduced or contracted to provide a seating for the flanged edge 6 of the inner closure which is soldered in position in the known manner.

The body of the tin is provided with an outer closure 7 having a screw-threaded flange 8 for engagement with the screw thread 3 of the body 1. The outer closure 7 is provided with an outwardly extending peripheral housing 9 which forms a recess for the reception of the cutting point 10 of a cutting device 11 which is secured to the lid 7 in the known manner.

In place of the continuous peripheral housing 9 a depression or housing 12 (see Figure 4) may be formed in the outer closure adjacent the cutter only, to receive the cutting portion thereof when moved into a non-cutting position. Further, in place of a continuous screw thread for engaging the outer closure with the body, an interrupted thread may be employed.

When it is required to cut the inner closure, the lid 7 is disengaged from the body of the container and the cutting device 11 moved towards the centre of the outer closure, and the outer closure thereafter screwed onto the body of the tin, whereupon the cutter will penetrate the inner closure and sever the said closure from the body. The pitch of the thread and the depth and angle of the cutter are so co-related that the cutting action takes place during the last revolution or so of the screw-engaging movement of the outer closure with the body so that the action of screwing home the closure positively cuts the inner closure.

It will be appreciated that the invention provides an easy opening container tin in which the inner closure 7 thereof may be employed to seal the contents of the container after the inner closure has been removed, the unbroken inner closure being protected from the cutting device which is disposed in the peripheral housing 9 or the depression 12.

What I claim is:—

An easy opening container comprising a cylindrical body portion provided with screw threads at one end thereof, an inner closure adapted to be hermetically sealed to said end, and an outer closure provided with a depending screw-threaded flange adapted to engage the threads of the body portion, said flange having an outwardly bulging portion thereby forming a recess between the inner and outer closures, a cutting device mounted to be radially shiftable on said outer closure and adapted to lie normally within the recess between the inner and outer closures when the outer closure is securelv seated by its threads upon the body portion, said cutting device being shiftable radially inwardly when the outer closure is unscrewed to a position so that the turning of the outer closure down upon its threads will cause said cutting device to positively pierce the inner closure and sever the same in a circular cut-out line.

ERNEST EDWARD BARLOW.