Feb. 7, 1933. H. T. GASELTINE 1,896,400

OPENING DEVICE FOR BOXES OR LIKE CONTAINERS

Filed Sept. 25, 1930

Fig. 1.

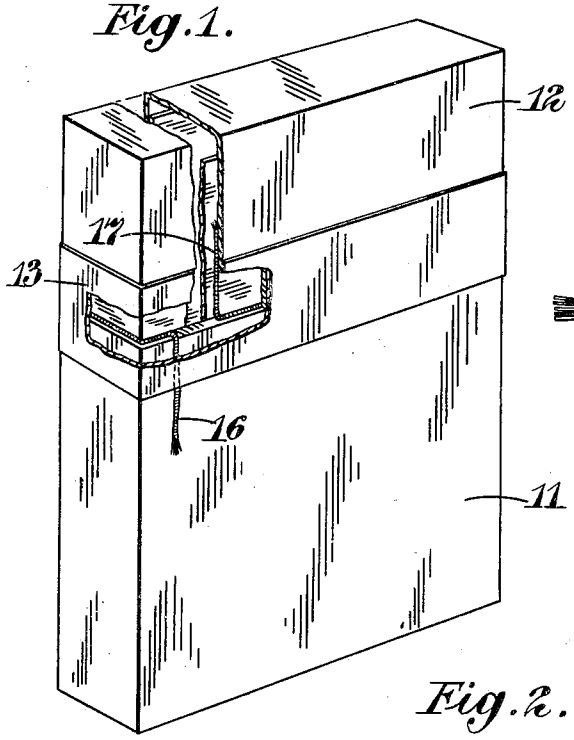


Fig. 3.

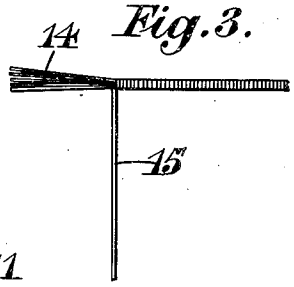
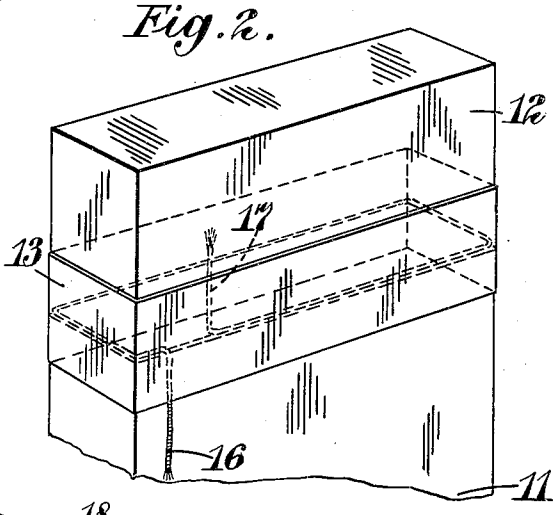


Fig. 2.



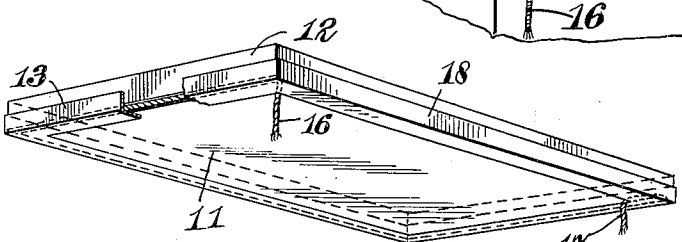


Fig. 4.

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UNITED STATES PATENT OFFICE

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OPENING DEVICES FOR BOXES OR LIKE CONTAINERS

Application filed September 25, 1930, Serial No. 484,360, and in Great Britain April 1, 1930.

This invention comprises improvements in or relating to opening devices for boxes or like containers.

The invention relates specially to opening devices for containers of the type in which the joint between the lid and the body portion of a container is sealed by a layer of gummed paper, celluloid, tin-foil or other suitable, fragile or tearable material, and in which there is provided beneath the sealing layer a "cutter cord" comprising a string or wire, one end of which projects through the sealing layer. On pulling this end of the cutter cord the sealing layer may be torn, thus permitting the container to be opened and its contents to be removed.

In opening devices for containers of this type as hitherto proposed, it has been necessary either to anchor to the container that end of the "cutter cord" which is located beneath the sealing layer, or else to wind the "cutter cord" more than once round the container, as otherwise on pulling the free end of the cutter cord the latter will simply be withdrawn through the hole in the sealing layer from which it projects without tearing the sealing layer.

It is the object of this invention to provide an opening device for containers of the above described type in which it is not necessary to anchor the enclosed end of the cutter cord, or to wind the latter more than once round the container; thus reducing the amount of material, and the time required for assembling the package.

According to the invention, in an opening device for a container of the type described, the surface of the cutter cord is roughened or serrated, so that when it is sought to unwind the cutter cord by means of its projecting end, the friction between the cutter cord and the sealing layer is sufficient to prevent its withdrawal from beneath the sealing layer without tearing the latter.

In a preferred form of the invention the cutter cord comprises a string which is provided with a friction surface, by binding it with metal, for example with tinsel foil strip.

The invention will now be described with reference to the accompanying drawing, in which:

Figure 1 is a perspective view of the container to disclose one method of attachment of the "cutter cord";

Figure 2 is also a perspective view showing the "cutter cord" in dotted lines;

Figure 3 is an enlarged view of the "cutter cord", and

Figure 4 is a perspective view of a modified form of container in which the "cutter cord" extends round three sides only of the container.

Like reference numerals indicate like parts throughout the drawing.

The container comprises a rectangular cardboard box 11 to contain photographic films or plates, provided with a removable lid 12 which slides over, the whole being enclosed by a sealing layer of gummed paper 13. A string 14 bound with tinsel foil strip 15 is wound once round the box underneath the sealing layer 13 at the junction between the body portion 11 and the lid 12. One end 16 of the string is taken out through the sealing layer.

The inside end 17 of the string is not anchored to the box but remains free and is conveniently bent at right angles to the length of the remaining portion of the string as shown in the drawing. On pulling the projecting end 16 of the string, the sealing layer is at once severed for the friction between the metal binding 15 of the string and the inside of the sealing layer 13 is sufficient to prevent withdrawal of the string from beneath the latter in spite of the fact that its inner end is not anchored.

In the modification illustrated in Figure 4, the string 14 extends round three sides only of the flat box 11, so that when the projecting end 16 of the string is pulled, three sides only of the sealing layer 13 will be severed, thus leaving the lid 12 and the body portion of the container 11 hinged together by the fourth side 18 of the seating layer which remains intact.

I claim:

1. The combination of a container comprising a body portion and a closure therefor,

and a sealing layer of tearable material overlying the joint between said body and closure portions, and a cutter cord of flexible material which is sealed beneath said sealing layer with one end protruding for a hand grip and which has throughout its length a circumferentially serrated surface structure so constituted as to provide a degree of friction sufficient, without positive anchorage of that end of the cord remote from the hand grip, to resist slip in the lengthwise direction of the cord between it and the sealing layer when the cord is pulled to break the seal.

2. The combination of a container comprising a body portion and a closure therefor, and a sealing layer of tearable material overlying the joint between said body and closure portions, and a wire which is sealed beneath said sealing layer with one end protruding for a hand grip and which has throughout its length a circumferentially serrated surface structure so constituted as to provide a degree of friction sufficient, without positive anchorage of that end of the wire remote from the hand grip, to resist slip in the lengthwise direction of the wire between it and the sealing layer when the wire is pulled to break the seal.

3. The combination of a container comprising a body portion and a closure therefor, a sealing layer of tearable material overlying the joint between said body and closure portions, and a cutter cord of flexible material which is sealed beneath said sealing layer with one end protruding for a hand grip and which comprises two flexible elements one wound upon the other to form throughout the length of the cutter cord a surface structure so constituted as to provide a degree of friction sufficient, without positive anchorage of that end of the cord remote from the hand grip, to resist slip in the lengthwise direction of the cord between it and the sealing layer when the cord is pulled to break the seal.

4. The combination of a container comprising a body portion and a closure therefor, a sealing layer of tearable material overlying the joint between said body and closure portions, and a cutter cord of flexible material which is sealed beneath said sealing layer with one end protruding for a hand grip and which comprises a string having its surface bound with a metal strip arranged to form throughout the length of the cutter cord a surface structure so constituted as to provide a degree of friction sufficient, without positive anchorage of that end of the cord remote from the hand grip, to resist slip in the lengthwise direction of the cord between it and the sealing layer when the cord is pulled to break the seal.

5. The combination of a container comprising a body portion and a closure therefor, a sealing layer of tearable material overlying the joint between said body and closure portions, and a cutter cord of flexible material which is sealed beneath said sealing layer with one end protruding for a hand grip and which comprises a string bound with successive convolutions of tinsel foil strip to form throughout the length of the cutter cord a surface structure so constituted as to provide a degree of friction sufficient, without positive anchorage of that end of the cord remote from the hand grip, to resist slip in the lengthwise direction of the cord between it and the sealing layer when the cord is pulled to break the seal.

6. The combination of a container comprising a body portion and a closure therefor, a sealing layer of tearable material overlying the joint between said body and closure portions, a cutter cord of flexible material which is sealed beneath three sides only of said sealing layer with one end protruding for a hand-grip, and which has throughout its length a circumferentially serrated surface structure so constituted as to provide a degree of friction sufficient, without positive anchorage of that end of the cord remote from the hand-grip, to resist slip in the lengthwise direction of the cord between it and the sealing layer when the cord is pulled to break the seal.

In testimony whereof I affix my signature.

HERBERT TENNYSON GASELTINE.