May 6, 1958 C. D. WELSHENBACH 2,833,456

CONTAINER

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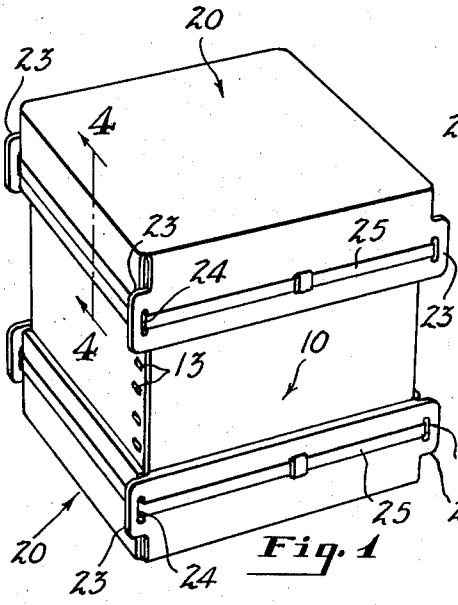


Fig. 1

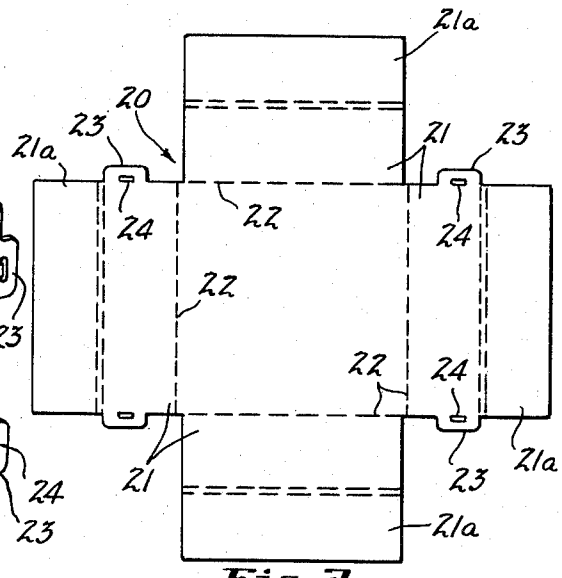


Fig. 3

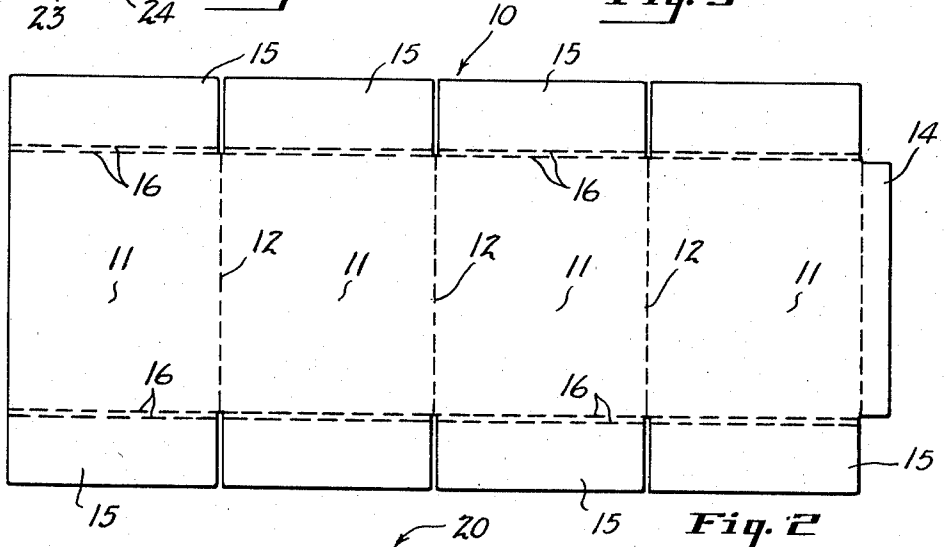


Fig. 2

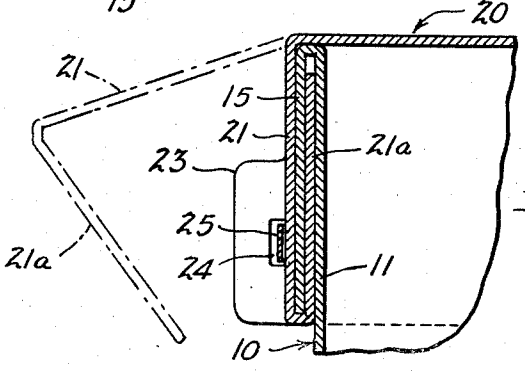


Fig. 4

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CONTAINER

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3 Claims. (Cl. 229—23)

This invention relates to paperboard containers and particularly to containers of the type comprising a paneled body having out-turned flaps at the end of each panel and a cover or covers therefor having down-turned flaps with in-turned end portions overlying the out-turned panel flaps.

Examples of containers of the type to which the invention relates are found in U. S. Patents 2,040,224, 2,214,220 and 2,474,968 to Unsinger, Beaman and Beach, respectively.

The object of the present invention is to provide a container of the above type in which girth straps around the reinforced end or ends of the container are positively anchored against longitudinal slipping along the container and in which such girth straps may be pre-positioned in proper encircling location prior to tightening and fastening.

Containers of the type to which the invention relates have been heretofore reinforced by flat girth straps or by girth wires. In the case of girth wires, longitudinal displacement has been prevented by notching the sides of the cover flaps in such a way as to allow the girth wire to be positioned within the notches at each corner of the container. In the case of girth straps, however, it has been impractical to provide similar notches because of the width of the strap. Notches which will accommodate a girth strap are of such a size as to seriously weaken the reinforced end structures of the containers. This weakening is particularly aggravated where a rectangular container is provided (as distinguished from a container of five or more sides, such as hexagonal or octagonal containers) because of the relatively acute angle of bend around the corners of the four-sided container, over which corners the tightened and encircling strap passes.

In general, flat straps are superior to narrow wires for the reason that the tension of a flat strap is more evenly distributed on the rim than is the tension of a narrow wire, so that flat straps are less likely to cut and weaken the container structures than are narrow wires. However, as above noted, it has not heretofore been practical to provide a flat strap with its inherent advantages and at the same time insure against longitudinal shifting, since the advantages of the flat strap, per se, are more than outweighed by the disadvantages of providing structure-weakening notches for the flat strap.

According to the present invention, a container is provided in which the cover flaps are not weakened in any manner across the entire width of the container structure but are provided with extending tabs through which open strap-positioning eyes or slots. Accordingly, there is provided a container structure which may utilize a flat reinforcing girth strap which is positively held against longitudinal displacement in such a way as to avoid any weakening of the structure. There is further provided a structure on which a strap may be threaded to be held in proper position during tightening thereof.

These and other advantages of the invention will become more apparent from the following disclosure of one example of the invention. In the drawings:

Figure 1 is a fragmentary perspective view of a container structure embodying the invention.

Figure 2 is a view of the body blank for the container shown in Figure 1.

Figure 3 is a view of the top or end blank for the container shown in Figure 1.

Figure 4 is a fragmentary view on an enlarged scale taken on line 4—4 in Figure 1.

The container body **10** is made of paperboard or similar suitable material, preferably a heavy corrugated paper. The body **10** is divided into panels **11** by means of creases or scores **12** extending longitudinally of the body. The body may be made from a flat blank and the overlapping edges of the material secured together by staples **13** or otherwise, a suitable end tab **14** being provided for fastening the sides of the blank to form a tubular body member.

At the end of each panel **11** is provided a projecting flap **15**, a score line or score lines **16** facilitating folding of each flap outwardly into proximity with the associated panel **11**, to which it is attached. The end or cover member **20** is of polygonal shape to fit the top of the body member **10**, and each side of the cover member **20** is provided with a projecting flap **21**, a score line or score lines **22** being provided for facilitating downward bending of each flap **21**. At least some of the flaps **21** are provided with tabs **23**, in which are formed slots or eyes **24**, in the manner shown in the drawings. The slots or eyes **24** preferably lie outside the normal side edges of the flaps **21** with which they are associated, as shown.

When the cover or top **20** is pressed on the body **10**, its flaps **21** are bent downwardly to engage the body panel flaps **15**, and the locking flaps **21***a* are rebent upwardly so as to lie between the body panels **11** and the body panel flaps **15**. A strap **25** extends around the downturned cover flaps and through the slots or openings **24** and is drawn up tight to hold the cover or end securely in position. The bottom of the container may consist merely of conventional overlapped and adhered or fastened flaps, or, as in the illustrated example, it may duplicate the top closure described above. It should be noted that in assembling the structure the strap **25**, when threaded through the eyes, is held thereby in exactly the correct position for subsequent tightening.

The specific carton structure shown in the drawings is disclosed only by way of example. The scope of the invention is defined in the following claims. In the claims, the unmodified term "strap" is to be understood as embracing flat straps and narrow wires, while the term "flat strap" is to be understood as specifying a substantially flat metal band.

What is claimed is:

1. A paperboard container having a tubular body of polygonal cross-section, a separate end closure wall of corresponding configuration disposed over one end of said body with the margin of said closure wall outwardly spaced from the adjacent side walls of said body, a plurality of body flaps on said body extending from said one end toward the other end of said body on the outer sides of the sidewalls of said body, closure flaps extending from said margin of said closure wall and corresponding to said body flaps, each of said closure flaps having an outer portion extending from said margin toward said other end of said body in covering relationship with an associated body flap and each of said closure flaps having a re-bent portion extending between said associated body flap and the associated sidewall of said body from the extremity of its said outer portion toward said one end, tabs extending laterally from sides of at least some of said closure flaps, slots in said tabs, a flat strap member tightly en-

circling said flaps and passing through said slots whereby said closure member is locked in substantially immovable reinforcing position on said container by means which do not derogate from the strength or tight closure of said container.

2. A device as defined in claim 1 in which said tubular body is of rectangular cross-section.

3. A paperboard container having a tubular body of polygonal cross-section having vertical sides and vertical corners, a separate end closure wall of corresponding configuration disposed over one end of said body with the margin of said closure wall outwardly spaced from the adjacent side walls of said body, a plurality of body flaps on said body extending from said one end toward the other end of said body on the outer sides of the sidewalls of said body, closure flaps extending from said margin of said closure wall and corresponding to said body flaps, each of said closure flaps having an outer portion extending from said margin toward said other end of said body in covering relationship with an associated body flap and each of said closure flaps having a re-bent portion extending between said associated body flap and the associated sidewall of said body from the extremity of its said outer portion toward said one end, tabs fixed to at least some of said closure flaps and extending laterally from said structure outwardly beyond the vertical side corners with which they are associated, said tabs being cut to form strap-receiving apertures, the inner edges of the apertures being substantially at the vertical side corners with which they are associated.

References Cited in the file of this patent

UNITED STATES PATENTS

1,480,358	Wirtz	Jan. 8, 1924
2,214,220	Beaman	Sept. 10, 1940
2,357,092	Mian	Aug. 29, 1944