July 4, 1933. A. W. MADSEN ET AL 1,916,519

CARTON FOR CYLINDRICAL OBJECTS

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FIG. 1.

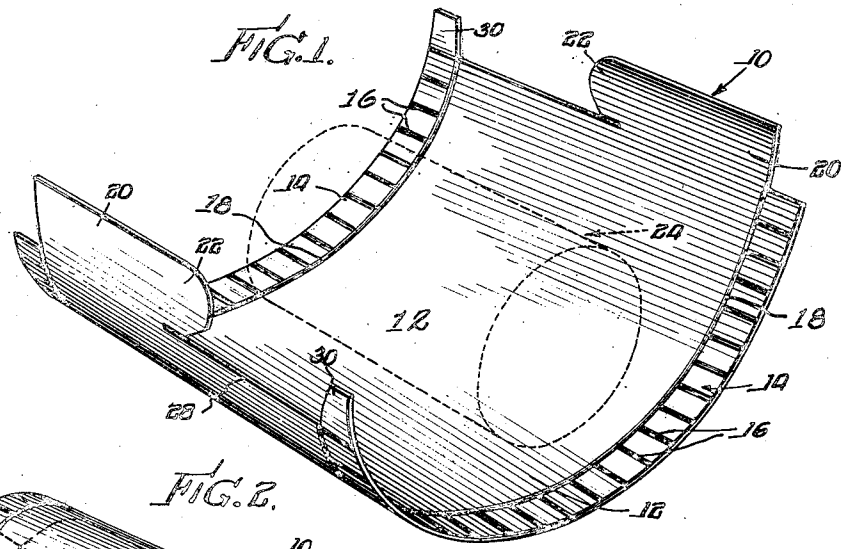


FIG. 2.

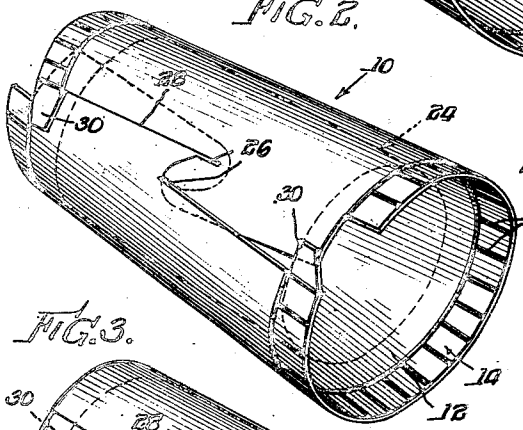


FIG. 3.

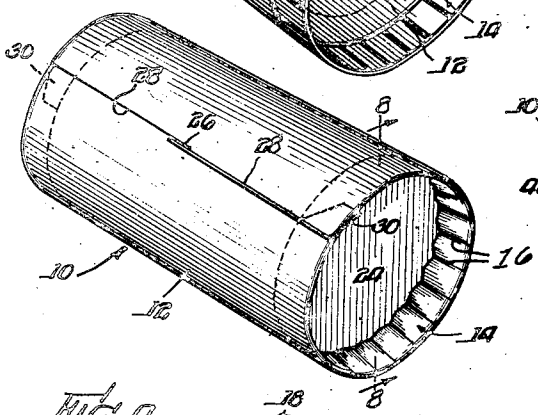


FIG. 4.

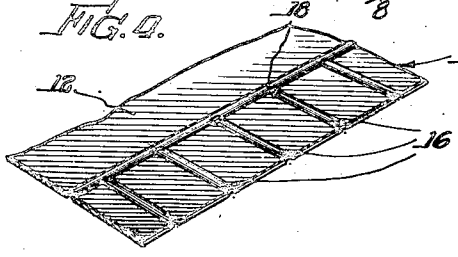


FIG. 5.

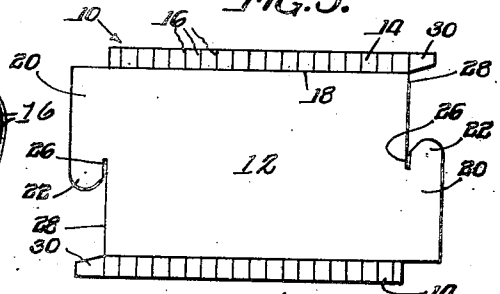
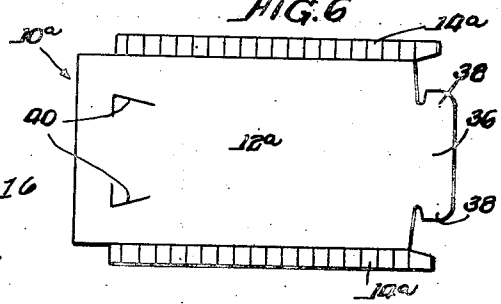


FIG. 6



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FIG. 7.

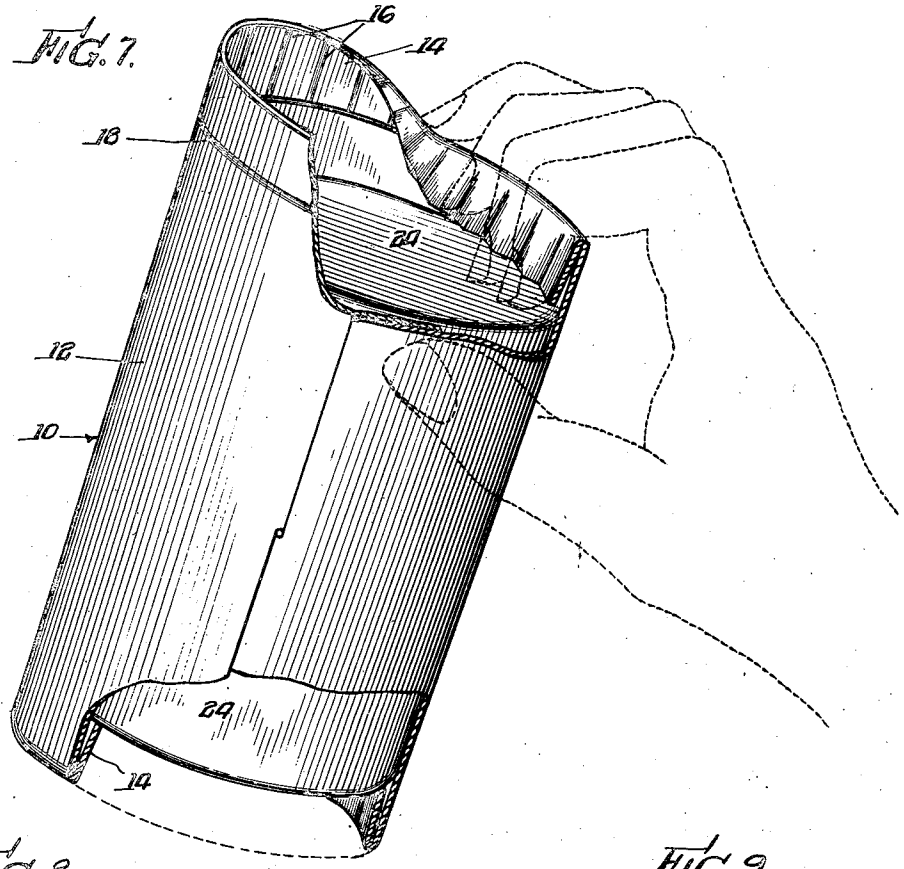


FIG. 8.

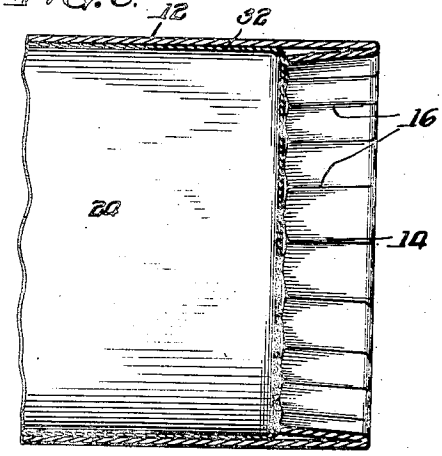
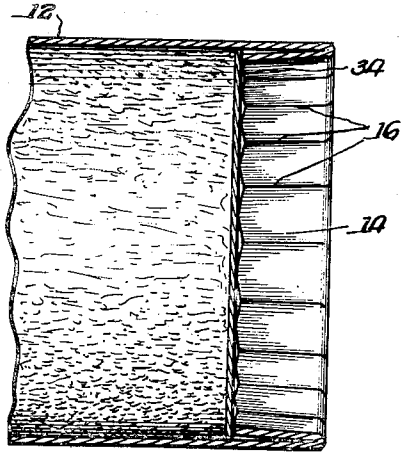


FIG. 9.



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1,916,519

UNITED STATES PATENT OFFICE

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CARTON FOR CYLINDRICAL OBJECTS

Application filed July 20, 1931. Serial No. 551,880.

This invention relates generally to cartons and more particularly to cartons for enclosing articles of cylindrical form.

One of the primary objects of the present invention is to provide a carton of improved practical design and construction, which will enable articles such, for example, as butter, to be maintained in cylindrical form, and which will permit access to the article with a minimum amount of effort by the user.

Another and more specific object of this invention is to provide a carton, as above set forth, which will enable access to the goods contained therein by disengaging interlocked peripheral portions of the carton blank and laterally moving said blank away from the goods so as to completely expose the same for convenient manipulation by the user. Thus, for example, when the carton is used for packaging butter in cylindrical form, said carton may be laterally shifted out of contact with the goods so as to enable the user to sever a portion of the butter without the necessity of relatively shifting the carton and butter in an axial direction. In other words, the goods may be manipulated without shifting its position with respect to the carton.

Another object of the present invention is to provide a carton of the type set forth above, in which the ends thereof may be conveniently folded inwardly so as to present an abutment for the goods within the carton, and thereby prevent axial shifting of the goods with respect to the carton, and to this end it is proposed to score the end margin of the carton blank, and thereby facilitate the inward folding of said margin.

A still further object of the present invention is to provide a carton for cylindrical articles, which is provided with a very simple and effective means for interlocking the adjacent margins of the carton blank when said margins are brought into juxta-position along the periphery of the article to be retained.

The foregoing and numerous other objects and advantages will be more apparent from the following detailed description when considered in connection with the accompanying drawings, wherein—

Figure 1 is a perspective view of a carton blank which is representative of one embodiment of my invention, said blank being shown in readiness to be wrapped around an article of cylindrical form;

Figure 2 is also a perspective view disclosing the carton in Figure 1, after the opposite margins thereof have been brought into juxta-position for the purpose of interlocking one with the other;

Figure 3 discloses the carton with the end margins thereof folded or tucked in so as to present abutments for the opposite ends of the retained goods;

Figure 4 is an enlarged fragmentary view of one of the end margins to disclose the manner in which said margins are scored to facilitate folding the same inwardly;

Figure 5 is a plan view of the carton blank disclosed in Figures 1 to 3 inclusive;

Figure 6 is a plan view of a carton blank provided with a modified tongue and slot connection for coupling the opposite marginal portions of the blank;

Figure 7 is a perspective view disclosing the manner in which the scored margins of the carton may be conveniently folded inwardly;

Figure 8 is an enlarged transverse sectional view taken substantially along the line 8—8 of Figure 3 to more clearly disclose the manner in which the scored margins of the carton provide an abutment for the end of the goods; and

Figure 9 is a view similar to Figure 8 disclosing the manner in which a cylindrical disk may be interposed between the end of the goods and the abutting edges of the scored margins, said margins in this instance serving to secure said disk against axial displacement.

Referring now to the drawings more in detail wherein like numerals have been employed to designate similar parts throughout the various figures, it will be seen that one embodiment of my invention contemplates the provision of a carton which is designated generally by the numeral 10.

This carton may be formed from a sheet of suitable flat stock, such, for example, as

wax coated or impregnated cardboard, and when the carton is initially blanked from the flat stock, it has the shape which is clearly shown in Figure 5. This blank includes a body portion 12 having oppositely disposed marginal flanges 14, which are provided with a plurality of scores 16 extending transversely thereof. These scores 16 extend between the outer edge of the flanges and an inner score 18 which serves to facilitate the inward folding of the flanges after the carton blank has been wrapped around the goods. Each of the other opposite margins of the carton body 12 is provided with a tab 20. Each of these tabs 20 is formed with a tongue 22, and these tongues are adapted to interlock with each other in the manner about to be described.

One class of goods for which the improved carton is particularly adaptable is roll butter, and for the purpose of illustrating one practical application of the invention, a roll of butter 24 is shown in operative association with the carton 10. In Figure 1 the roll 24 is disclosed by dotted lines. If the roll 24 is placed upon the carton 10 in the position shown in Figure 1, the carton blank may be conveniently wrapped around the roll so as to bring the tongues 22 of the tabs 20 into juxta-position, as clearly shown in Figure 2. It will be seen that a slit 26 extending along the inner side of each tongue is adapted to receive the inner section of the other tab, so that when the tongues are completely interlocked, the marginal edges 28 will occupy the position of alinement shown in Figure 3. The interlocking of the tongues 22 may be accomplished with minimum effort on the part of the user and without the necessity of handling or shifting the roll 24.

After the carton body 12 has been wrapped around the cylindrical periphery of the roll 24, as described above, the marginal flanges 14 may be folded inwardly in the manner shown in Figure 7. By providing the circumferential score 18, the inward folding or bending of the margins 14 is greatly facilitated, and this score 18 not only serves to determine a sharp or definite line of fold but also materially assists in initiating the fold and thereafter maintaining the folded relationship of the flange 14. The transverse scores 16 cooperate with the score 18 in also facilitating the inward folding of the flanges, and it will be seen in Figures 3, 7, and 8 that these transverse scores 16 enable the inturned flanges to partake of an undulated or wave-like form so as to present an edge which is spaced sufficiently from the inner surface of the body 12 to provide an abutment which positively prevents the axial shifting of the roll 24 within the carton. Furthermore, by having the flanges 14 bent inwardly in the manner disclosed in the drawings, it will be apparent that relative axial shifting between the interlocked margins of the carton body 12 is positively prevented, thereby maintaining the interlocked relationship of the tongues 22. In fact, these tongues cannot be disengaged until the flanges 14 are again bent outwardly so as to permit of relative shifting of the interlocked margins of the body 12 in a longitudinal or axial direction. Attention is also directed to a tab 30 provided at one extremity of each of the flanges 14. These flanges 30 provide an overlap for the adjacent extremities of each flange when the carton assumes its cylindrical form, as clearly shown in Figure 3. These tabs also serve to facilitate the outward bending of their companion flanges 14 to initiate the unwrapping of the carton from the roll.

When it is desired to unwrap the carton from the roll 24, it is only necessary for the user to exert a pull on the tab 30 so as to bend the adjacent portion of the companion flange outwardly and to then continue the outward bending of the remaining portion of the flange. The contents or roll may now be pushed longitudinally out of the carton by exerting pressure at the opposite end of the roll or the opposite flange 14 may be folded outwardly so as to enable the tongues 22 to be disengaged. The disengagement of the tongues enables the carton to be shifted laterally out of contact with the peripheral surface of the roll to the position shown in Figure 1. In this manner the contents of the carton may be completely exposed. Such an arrangement has a very practical application in connection with roll butter and goods of that general class. It is frequently desired to sever sections of the roll butter to provide butter chips or for other culinary purposes. By having cartons of conventional design, it is the usual practice to open one end thereof, withdraw the butter, remove a parchment wrapping, and then sever the portion which is required. By employing a carton constructed in accordance with the teachings of the present invention, no shifting of the butter with respect to the carton need be made. In other words, it is only necessary for the user to open or bend outwardly the abutment flanges 14, disengage the tongues 22, and then laterally shift the carton body 12 out of contact with the peripheral surface of the roll 24. A portion of the parchment paper 32 which is usually wrapped around the butter, may now be partially removed so as to expose the required amount of butter to be severed. After the severance the parchment paper may again be folded around the remaining portion of the butter, the carton body 12 again shifted to the position shown in Figure 2 so as to enable the engagement or interlocking of the tongues 22, and the flanges 14 can be turned inwardly. In this manner butter may be handled for culinary

use with a minimum possibility of experiencing any deformation.

In Figure 8 we have disclosed inner edges of the inturned flanges 14 directly engaging the parchment paper 32. However, it may be desirable in certain instances to employ a disk 34, as shown in Figure 9. This disk 34 may be interposed between the inturned edge of the flange 14 and the end surface of the roll 24. It will be clear that the undulated inturned margin of the flange 14 provides an effective abutment to prevent axial outward displacement of the disk 34 and serves to retain said disk in sealed relation with respect to the carton chamber. In the specification and claims the term "roll" is employed to define the shape of the article or object retained by the carton. Obviously the term "roll" should not be limited to a solid object, such as a roll of butter or similar product, but should be given a broad interpretation to include other types of goods, such as granular or flaked products which are adapted to assume a cylindrical mass when retained within the carton, Fig. 9. When the carton is used to enclose products of that nature, it is preferable to employ the disk 34, said disks in such instances providing an effective seal to prevent leakage of the goods through the end of the carton.

In Figure 6 a carton blank is disclosed, which is designated generally by the numeral 10*a*. This blank differs only from the carton 10 in that modified means is disclosed for interlocking the peripheral margins of the carton blank. It will be seen that the blank 10*a* includes a body 12*a* and oppositely disposed and scored marginal flanges 14*a*. One margin of the body 12*a* is provided with a tab 36, which is formed at each end with tongues 38. These tongues are adapted to be received by companion slits 40 provided at the opposite end of the carton stock so as to secure the carton margins together after the body 12*a* has been wrapped around the roll 24. While two specific forms of interlocking means have been disclosed in the drawings, it should be understood that the invention is not limited to these specific forms, but contemplates other modifications and changes without departing from the spirit and scope thereof. It is preferable to employ carton material which is semi-flexible and sufficiently rigid to withstand considerable handling without experiencing any disfigurement or deformation. In fact, by having the flanges 14 semi-flexible, they may be conveniently folded inwardly and will remain in their folded position so as to present a firm abutting edge to prevent axial displacement of the retained object.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

1. A carton having a body adapted to be wrapped around a cylindrical object, and a flange formed at the margin of the body, said flange being semi-flexible and having a plurality of spaced preformed transverse scores, whereby it may be manually turned inwardly after the cylindrical object has been inserted, to form an abutment for preventing the escape of said object, the flange being of sufficient stiffness to maintain itself in abutting position.

2. A carton having a body adapted to be wrapped around a cylindrical object, a flange formed at the margin of the body, said flange being semi-flexible whereby it may be manually turned inwardly after the cylindrical object has been inserted, to form an abutment for preventing the escape of said object, the flange being of sufficient stiffness to maintain itself in abutting position, and a tab extending from said flange which is adapted for convenient manual manipulation to initiate the unfolding of the flange in opening said carton.

3. A carton having a body adapted to be wrapped around a cylindrical object, a flange formed at oppositely disposed margins of the body, said flange being semi-flexible and scored transversely whereby it may be manually turned inwardly after the cylindrical object has been inserted, to form an undulated abutment edge for preventing the escape of the object, the flange being of sufficient stiffness to maintain the edge thereof in abutting relation with respect to the object, whereby to secure the object against longitudinal displacement in either direction within the carton, and means for securing adjacent margins of the carton together to maintain the cylindrical shape thereof.

4. A carton having a body adapted to be wrapped around a cylindrical object, a flange formed at oppositely disposed margins of the body, said flange being semi-flexible and scored transversely whereby it may be manually turned inwardly after the cylindrical object has been inserted, to form an undulated abutment edge for preventing the escape of the object, a disk adapted to be positioned at each end of the object in abutting relation with respect to said inturned undulated edge, the flange being of sufficient stiffness to maintain the edge thereof in abutting relation with respect to said disks, whereby to secure the object against longitudinal displacement in either direction within the carton, and means for securing adjacent margins of the carton together to maintain the cylindrical shape thereof.

In witness whereof, we have hereunto subscribed our names.

ALFRED W. MADSEN.
SAMUEL D. GAZZOLO.