April 8, 1952 F. J. SHIRLEY 2,591,882

WRAPPER OR CONTAINER OF CARDBOARD OR LIKE MATERIAL

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Fig. 1.

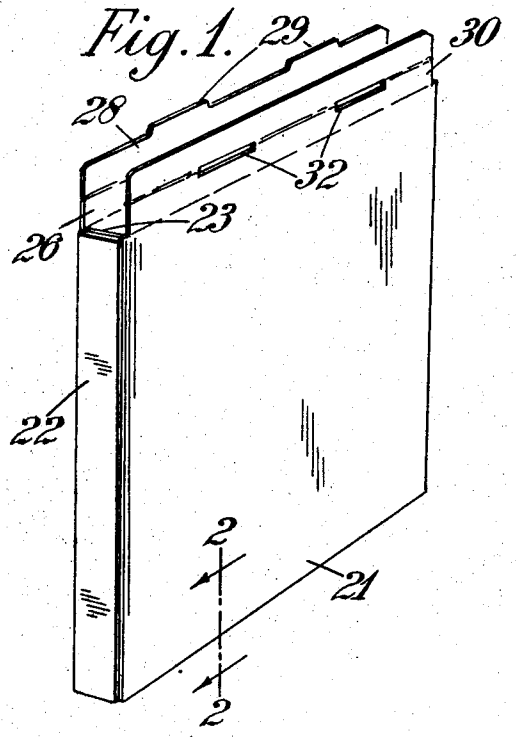

Fig. 3.

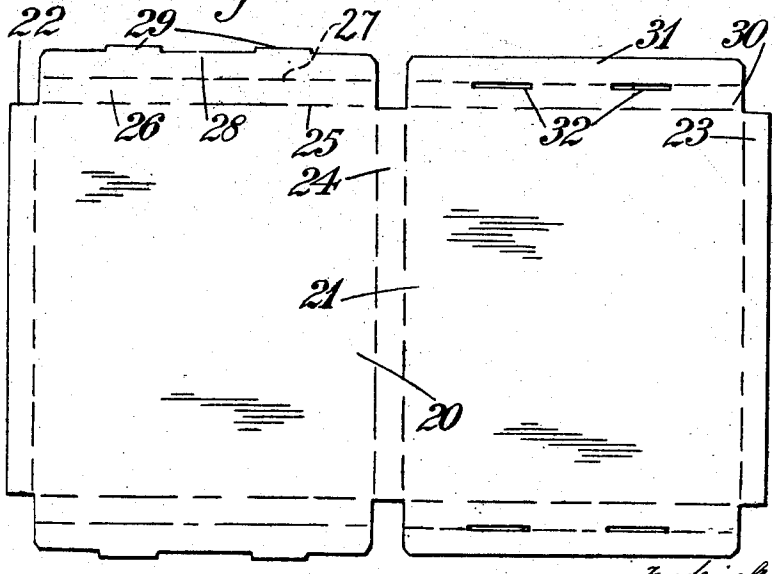

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Fig. 2.

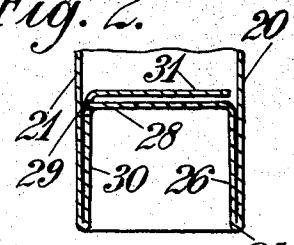

Fig. 5.

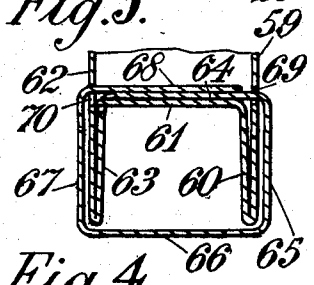

Fig. 4.

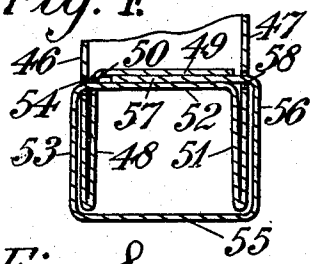

Fig. 7.

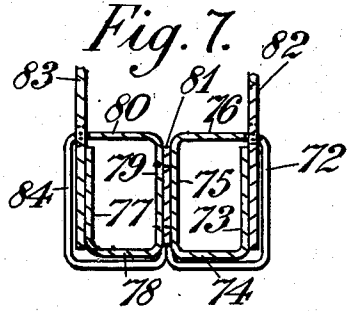

Fig. 8.

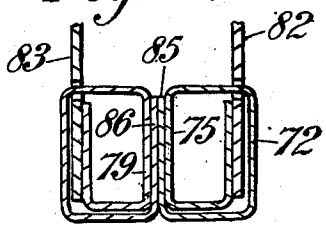

Fig. 6.

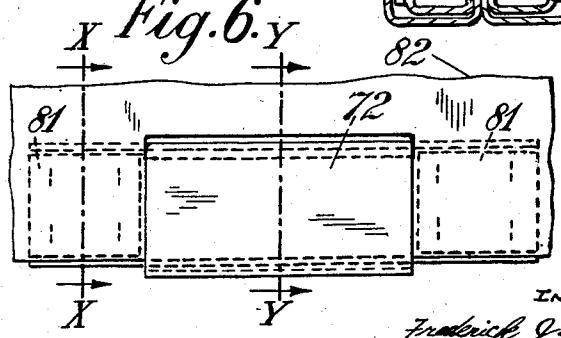

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Fig. 9.

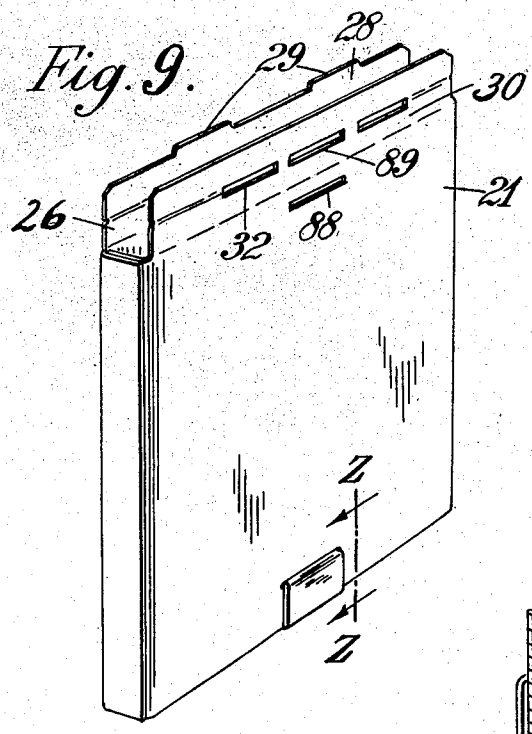


Fig. 10

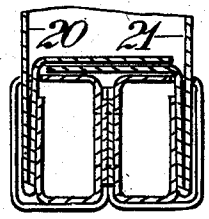
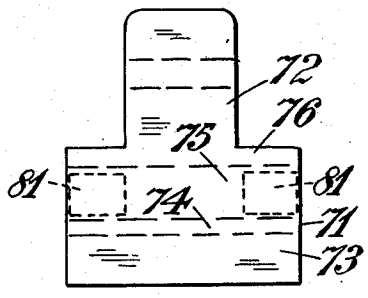


Fig. 11.



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WRAPPER OR CONTAINER OF CARDBOARD OR LIKE MATERIAL

Frederick John Shirley, London, England

Application October 28, 1949, Serial No. 124,203
In Great Britain November 2, 1948

6 Claims. (Cl. 229—87)

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This invention relates to wrappers or containers made of cardboard, strawboard, pasteboard or other foldable sheet material comprising sheets which are spaced apart, being either separate sheets or a folded sheet, which are to be secured together and closed at their ends. The object of the invention is to provide an improved construction of wrapper or container which is easy to use, not liable to accidental opening and adds considerably to the strength of the package.

The invention is illustrated in the accompanying drawings, in which

Figure 1 is a perspective view showing one form of container to which the invention may be applied,

Figure 2 is a part-sectional view on the line 2—2 of Figure 1,

Figure 3 shows the blank from which the container of Figure 1 is made,

Figures 4 and 5 are sectional views similar to Figure 2, showing one form of the invention applied to the container,

Figure 6 is a front view of part of another container to which the invention is applied,

Figure 7 is a section on the line X—X of Figure 6,

Figure 8 is a section on the line Y—Y of Figure 6,

Figure 9 is a view similar to Figure 1, showing another container to which the invention is applied,

Figure 10 is a section on the line Z—Z of Figure 9, and

Figure 11 shows one of the blanks used for making a tie for use with the containers shown in Figures 6 or 9.

Figure 1 shows a container already known. The container is suitable for use as a book-wrap. This container is made from a blank illustrated in Figure 3 and has two opposite side-walls **20**, **21**, which are permanently connected together at their edges **22**, **23**, and by an intermediate edge wall **24**. One end of the container may be permanently closed, but in the form illustrated both ends are closed by means of hinged flaps. The wall **20** has a flap hinged to it along the crease-line **25** so that the portion **26** of the flap can fold inside the container; the flap is also formed with a second crease-line **27** parallel to the crease-line **25** so that the portion **28** of the flap can be folded at right-angles to the part **26**. The dimensions of the flap are such that when it is folded into the container as shown in Figure 2, the portion **28** of the flap extends across the space between the walls **20**, **21**. On the free

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edge of the flap there are formed any desired number of lugs **29**.

The wall **21** is formed with a similar flap having two parts **30**, **31** which can be folded inside the container to an L-shape, as shown in Figure 2, the part **31** lying inside the container with respect to the part **28** of the other flap.

The flap **30** is formed with apertures **32** corresponding in number, size and spacing to the lugs **29** on the flap **26**, **28** so that, when folded into the container, the lugs **29** engage in these apertures **32** and lock the parts in this position.

The parts **26** and **30** of the flaps reinforce and stiffen the marginal edges of the walls **20**, **21** when in their closed position, and the parts **28**, **31** of the flaps which extend across the width of the container reinforce it against collapsing and also provide a cushioning effect.

According to the present invention the two opposite walls carrying the co-operating flaps should be tied together and Figures 4 and 5 show two constructions for effecting this.

Referring first to Figure 4 which is a similar view to Figure 2, the two side-walls of the container are shown at **46**, **47** respectively, and the side wall **46** is formed with a flap **48**, **49** similar to the flap **30**, **31** of Figure 2 and provided with an aperture **50** adjacent the crease between the two parts of the flap. The wall **47** is provided with a flap **51**, **52**, which is similar to the flap **26**, **28** of Figure 2, but the lug which engages the aperture **50** in the other flap is extended at **53** to form a long tongue which is passed through the aperture **50** and through an aperture **54** in the wall **46** and is then folded around the ends of the walls **46**, **47** as shown at **55**, **56** and the end of the tongue **57** is inserted through an additional aperture **58** in the wall **47** to enter between the parts **49**, **52** of the two flaps where it is securely retained. The part **55** of this tongue constitutes a tie which prevents separating movement of the two walls **46**, **47** but when it is desired to open the end of the container, the tongue **57** is withdrawn, thereby releasing the tie, after which the two flaps can be withdrawn, as in the construction illustrated in Figure 2.

Figure 5 shows an alternative construction which has a general resemblance to Figure 4, but the tongue which constitutes the tie is formed on the flap which has the apertures instead of the flap which has the lugs. The side wall **59** is formed with the flap **60**, **61** which has lugs on it exactly like the flap **26**, **28** of Figure 2 and the side wall **62** is formed with a flap **63**, **64** which is formed with the apertures to receive the lugs,

but this flap is extended as a tongue beyond 64 at 65, 66, 67, 68 and this tongue is threaded through an aperture 69 in the wall 59 and then folded round over the ends of the walls 59, 62 and inserted through the aperture 70 in the wall 62 so as to lie beside the part 64 of the flap on the wall 62.

Instead of forming the tie, which is to secure the side walls together, as an extension of one of the flaps, it may be formed as a separate member which is engaged with each of the side walls and for this purpose a preferred construction as illustrated in Figures 6, 7, 8 and 11 may be used. A blank of cardboard or like sheet material is formed of T-shape as illustrated in Figure 11, comprising a cross-bar indicated generally by the reference 71 and a stem 72 which forms a tongue. The part 71 is creased so that it can be folded lengthwise into a box-like section as shown in Figure 7, whereof the walls are shown at 73, 74, 75 and 76.

Preferably this blank is associated back to back with a similar blank and as shown in Figure 7, comprising the parts 77, 78, 79 and 80; packing pieces 81 (see Figures 7 and 11) are inserted between the two parts 75 and 79, all these parts being secured together in any convenient manner. The packing pieces 81 are spaced apart as shown in Figure 11 so as to leave a space between them at least equal in width to the width of the stem or tongue 72.

Each of the two sheets or walls 82, 83 which are to be tied together is provided with an aperture near the marginal edge at a point which, when the box-like sections 73, 74, 75, 76 and 77, 78, 79, 80 are inserted as shown in Figures 7 and 8, will enable the tongues 72 and 84 to be passed outwards, each through its appropriate aperture, and folded around the edges of the sheets 82, 83 and have their ends inserted as shown at 85, 86 between the parts 75, 79 in the space between the distance pieces 81 where they are frictionally retained; the two sheets 82, 83 are thereby effectively retained against accidental separation, but they can be separated by withdrawing the tongues 85, 86 so that they can be drawn out through the aperture in the sheets.

It will be seen that the composite tie-member constituted by two blanks 71, in addition to securing the two sheets 82, 83 together also acts as a closure for the space between them, and provides reinforcement for the edges of the sheets and prevents them from being collapsed together. It will further be seen that a single blank 71 folded in the manner above described could be used as a tie member and reinforcement, by arranging that the tongue on it after passing outwards through one sheet is folded around the edges of both sheets and is inserted through the aperture in the second sheet.

The tie member as illustrated in Figures 7 and 8 may be associated with the known construction illustrated in Figure 1, such an arrangement being shown in Figures 9 and 10. The container shown in Figure 9 has all the parts shown in Figures 1, 2 and 3 with the same references attached thereto, but additional apertures are provided as at 88 in the walls 20 and 21 and also apertures 89 in the flaps connected respectively to these walls, in order to accommodate the tongues. The two flaps are folded in in the manner described with reference to Figure 1, and the composite tie member then inserted between the parts 26 and 30 of the flaps with the tongues extending outwards through the apertures 89 and 88, and then bent around the ends of the walls so that the free ends of the tongues are tucked in between the box-like portion of the tie to be retained therein.

I claim:

1. A container of the type composed of two sheets of foldable material spaced apart in parallel relation to receive an article between them, having an extension from one edge of one of the sheets folded inwardly to lie against the inner surface of the sheet and then bent at right angles away from the sheet to bridge the space between the sheets and to abut against the other sheet thereby to serve as a strut holding the sheets separated and having a tie connecting the two sheets adjacent the said edge for holding the sheets against further separation, which tie comprises a strip of foldable material bent to the form of a rectangular section tube and so associated with the sheets that one side spans the gap between the sheets, the opposite side thereto also extends across the gap, one of these two sides passing through slots in the two sheets, and the other pair of opposed sides lie against the outer faces of the two sheets respectively.

2. A container as claimed in claim 1 in which the strut has at least one lug extending from the free end and fitting into a slot in the said other sheet against which the strut abuts.

3. A container as claimed in claim 1 in which each sheet has an extension folded as aforesaid, the two struts formed thereby lying in face to face relation.

4. A container of the type composed of two sheets of foldable material spaced apart in parallel relation to receive an article between them, having an extension from one edge of one of the sheets folded inwardly to lie against the inner surface of the sheet and then bent at right angles away from the sheet to bridge the space between the sheets and to abut against the other sheet thereby to serve as a strut holding the sheets separated and having a tongue forming a continuation of said extension which tongue passes outwardly through a slot in the said other sheet, is bent through 90° towards the adjacent edge of the sheet and to lie against the outer face of the sheet, is bent inwardly through 90° to span the gap between the sheets, is bent again through 90° to lie against the outer face of the other sheet and is then bent inwardly through 90° and passed inwardly through a slot in the sheet of which the tongue is a continuation, the part of the tongue which spans the gap serving as a tie preventing further separation of the sheets.

5. A container of the type composed of two sheets of foldable material spaced apart in parallel relation to receive an article between them, having an extension from one edge of one of the sheets folded inwardly to lie against the inner surface of the sheet and then bent at right angles away from the sheet to bridge the space between the sheets and to abut against the other sheet thereby to serve as a strut holding the sheets separated, having an extension from the corresponding edge of the other of the sheets folded inwardly to lie against the inner surface of the sheet, then bent at right angles away from the sheet to bridge the space between the sheets and having a tongue forming a continuation of said second mentioned extension which tongue passes outwardly through a slot in the first mentioned sheet is bent through 90° towards the adjacent edge of the sheet and to lie against the

outer face of the sheet, is bent inwardly through 90° to span the gap between the sheets, is bent again through 90° to lie against the outer face of the other sheet and is then bent inwardly through 90° and passed inwardly through a slot in the sheet of which the tongue is a continuation, the part of the tongue which spans the gap serving as a tie preventing further separation of the sheets.

6. A container of the type composed of two sheets of foldable material spaced apart in parallel relation to receive an article between them, having an extension from one edge of one of the sheets folded inwardly to lie against the inner surface of the sheet and then bent at right angles away from the sheet to bridge the space between the sheets and to abut against the other sheet thereby to serve as a strut holding the sheets separated and having a tie connecting the two sheets adjacent to the said edge for holding the sheets against further separation, which tie is composed of two T-shaped pieces of foldable sheet material secured together with the cross-bars of the T-shapes in face-to-face relation and with the legs of the T-shape extending in the same direction, the cross-bars being separated by distance pieces of twice the thickness of the sheet material located between the ends of the bars, and which tie has the two legs of the T-shaped pieces bent outwardly from one another and through 90°, the two legs threaded through two slots in the two sheets respectively so that the upper portion of the legs lie in the same plane and span the space between the two sheets and the two cross-bars lie between the sheets and parallel thereto, the two legs bent through 90° towards the adjacent edges of the sheets to lie against the outer faces of the two sheets respectively, the two legs then bent inwardly through 90° to extend inwardly over the edges of the two sheets each towards the other sheet and the two legs finally bent through 90° and inserted with frictional engagement into the space between the two cross-bars.

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