Jan. 12, 1932. J. D. TENNANT 1,841,222

COVERED COLLAPSIBLE PAPER BOX

Filed Nov. 15, 1930 2 Sheets-Sheet 1

Fig. 1.

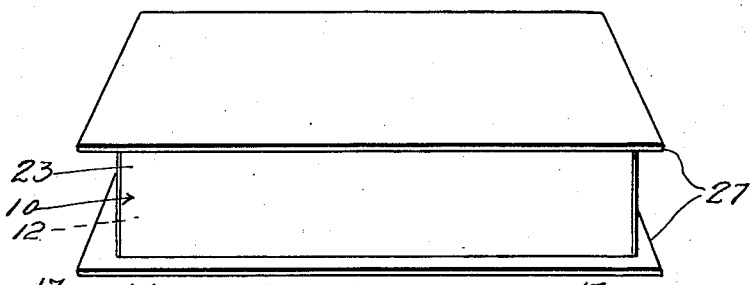


Fig. 2.

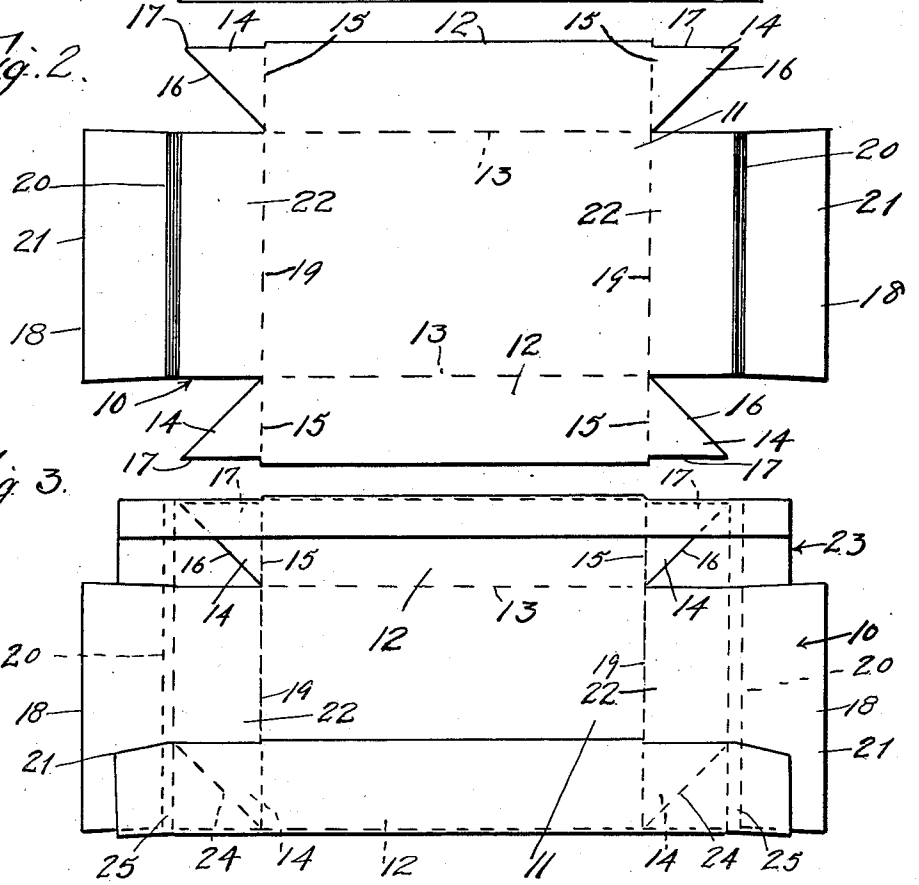


Fig. 3.

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Fig. 4.

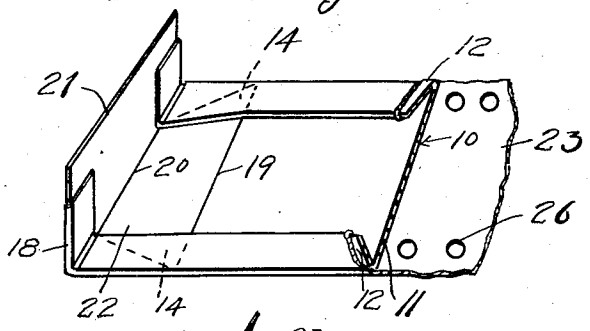


Fig. 5.

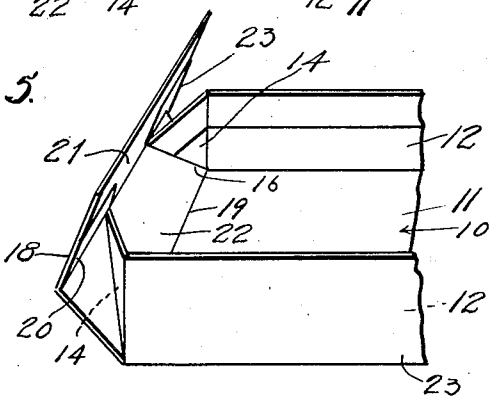


Fig. 6.

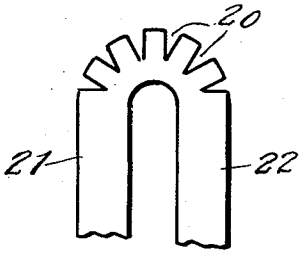


Fig. 7.

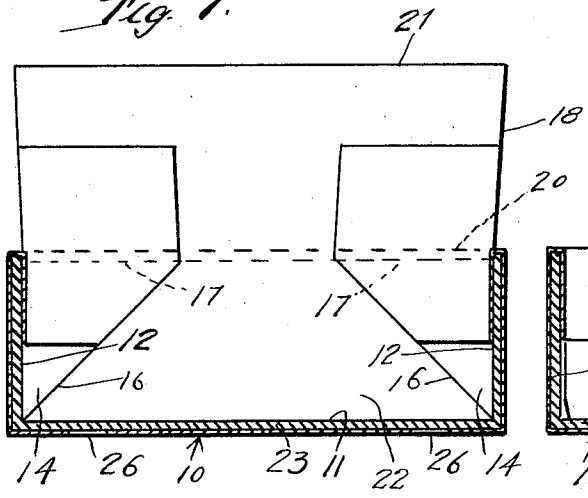
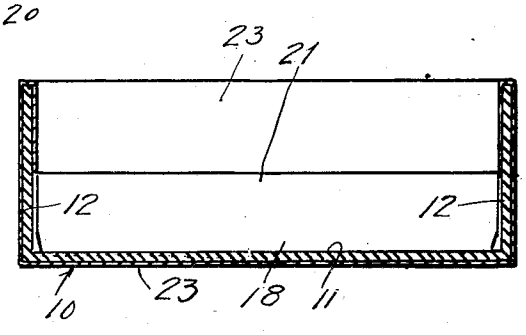


Fig. 8.



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JOHN D. TENNANT, OF PHILADELPHIA, PENNSYLVANIA

COVERED COLLAPSIBLE PAPER BOX

Application filed November 15, 1930. Serial No. 495,826.

My invention relates to new and useful improvements in a foldable collapsible paper box and has for one of its objects to provide for folding the end walls of the body and lid by forming cut scores along the lines of folding.

Another object of the invention is to construct the end tabs so that when the end walls are folded over said tabs the completed end walls will be of the same height as the side walls.

A further object of the invention is to shape the inner leaves, considered in connection with the completed box, in such a way that said inner leaves will bind on the side walls to hold the parts in their assembled condition without bulging the side walls.

A still further object of this invention is to so fashion the cover paper for either the body or lid as to provide "islands" or recesses to contain an adhesive for fastening the panels to the body and lid to produce a French type box.

With these and other ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by numerals to the accompanying drawings forming a part of this application, in which:—

Fig. 1 is an isometric view of a box of the French type embodying my invention.

Fig. 2 is an outer face view of a blank from which either a lid or body may be produced.

Fig. 3 is an inner face view after the cover paper has been applied showing one side folded over in the position for securing parts of the cover paper to the end leaves.

Fig. 4 is a fragmentary perspective view of one of the box elements of simplest form showing one of the leaves turned up and with a part of the cover paper torn off and another part allowed to extend beyond the blank to illustrate the apertures to form the recesses or "islands".

Fig. 5 is also a fragmentary perspective view illustrating another position of the end leaves in the course of folding to form an end wall.

Fig. 6 is an enlarged fragmentary edge view, possibly exaggerated, of the two leaves forming a part of an end wall to illustrate the formation of the cut scores which permit folding of the leaves.

Fig. 7 is an enlarged transverse sectional view of one of the box members set up with the inner leaf extended.

Fig. 8 is a similar view illustrating the inner leaf folded into place.

In carrying out my invention as herein embodied 10 represents a blank fashioned from relatively thick card board or other suitable similar material to provide a bottom 11, and sides 12 foldable along the dotted lines 13, and the ends of said sides have end tabs 14 formed therewith and foldable inward on the dotted lines 15. The tabs are of triangular shape with the hypotenuse 16 of each extending outwardly from the junction of contiguous side, leaf and bottom, and the outer edge 17 of each of said tabs terminates short of or is inset relative to the outer edge of the side wall from which it projects.

The blank also includes end members 18 foldable from the bottom along the dotted lines 19 and weakened intermediate their ends by a plurality of transverse parallel contiguous cut scores 20 defining inner and outer leaves 21 and 22 considered relative to their positions in the assembled box element. The side edges of each outer leaf 22 are parallel but the side edges of each inner leaf 21 diverge from the scoring to the end edge for a purpose which will be later explained.

Over the outer surface of the blank shown in Fig. 2 is disposed the cover paper 23 of rectangular shape with two pasted edges turned over and secured to the inner surfaces of the sides 12 as shown at the upper portion of Fig. 3, and its said inturned edges that are pasted in place. The ends of the cover paper extend over the inner leaf 21 any suitable distance and are pasted thereto.

Next the sides 12 of the blank with the

cover paper thereon are folded in along the dotted lines 13 as shown at the lower portion of Fig. 3, and the parts of said cover paper beyond the end tabs 14 is then pasted to the inner and outer leaves 21 and 22, and these last mentioned pasted portions of the cover paper are then foldable along the hypotenuse line of the end tabs as indicated at 24, Fig. 3, and along the lines of folding of the leaves as indicated at 25 in the same figure.

Now the inner leaves 21 can be folded up along the cut scoring 21 as shown in Fig. 4, and then by gradually moving the outer leaf as shown in Fig. 5 until it assumes a position at right angles to the bottom 11, the end tabs will fold inward similar to an accordion pleat, and by removing the inner leaves into the box element until they contact with the end tabs the latter will be inclosed with the two leaves of an end wall, and as the upper edges of said tabs are short of the upper edges of the sides the leaves will assume a position in which their outer edges will correspond with the outer edges of the side walls.

Because of the flaring edges of the inner leaf the latter will bind on the inner surfaces of the side walls, Fig. 8, and prevent accidental displacement of the leaves or the accidental collapsing of the box element. By reversing the actions above referred to the box element may be collapsed.

While I have referred to the part 11 as a bottom, it is to be understood that this term is also to cover a top wall where it occurs in the lid of the box, and likewise it is to be understood that both the body and lid of the box are to be similarly constructed, except that one must be sufficiently larger than the other as to telescope thereover, and in most instances the ends and sides of the cover should be high or deep enough to cover similar parts of the box body.

So far I have described the simplest form of my invention, but where a box is to be made of the French type that portion of the cover paper 23 which is disposed over the bottom wall 11 has a number of holes 26 formed therein, which when the cover paper is on the box element form "islands" or recesses in connection with the box wall to receive a suitable adhesive by which a panel 27 is fixed to the box element. The cover 23 is of sufficient thickness to house an adhesive in the recesses and therefore the panel will lie snugly against the cover paper and the adhesive will not be in view, nor will there be any space between the box element and the panel that a person might see into.

Each panel 27 is covered with the cover paper the same as the box element for ornamental purposes.

Of course, I do not wish to be limited to the exact details of construction herein shown, as this may be varied within the limits of the appended claims without departing from the spirit of my invention.

Having thus fully described my invention what I claim as new and useful is:—

1. A covered collapsible paper box including a body and lid each produced from a blank including a central wall, sides and end elements foldable therefrom, said end elements having a plurality of contiguous parallel cut scores transversely thereof to define two leaves in each and permit one leaf to fold over in spaced parallelism to the other leaf, and a cover paper disposed over the outer surface of the blank with portions secured to the inner surfaces of the inner leaves and also having its side edges folded in and secured to the inner surfaces of the sides.

2. The structure set forth in claim 1, in combination with triangular tabs projecting from the ends of the sides from which they are foldable to lie between the leaves of and adjacent end.

3. A paper box element consisting of a central wall, sides foldable therefrom, end tabs foldable from the sides and of triangular shape with their outer edges terminating short of the outer edges of the sides, end elements foldable from the central wall and each having a plurality of parallel transverse cut scores to define two leaves and permit one leaf to fold over the end tabs and the inner leaves having diverging side edges to bind upon the side walls and hold the parts in place, and a cover paper disposed over the exterior of the box element with portions beyond the tabs secured to the inner surfaces of the leaves and foldable between said tabs and both leaves of an end member.

4. The structure set forth in claim 3, in combination with a paper covered panel secured to the box element by an adhesive located within recessed "islands" produced by holes formed in the cover paper of the box element.

5. A box element formed from a blank fashioned to include an end element having a plurality of parallel transverse cut scores to define leaves and permit folding of one leaf into parallel spaced relation to the other leaf.

In testimony whereof, I have hereunto affixed my signature.

JOHN D. TENNANT.