

May 15, 1923.

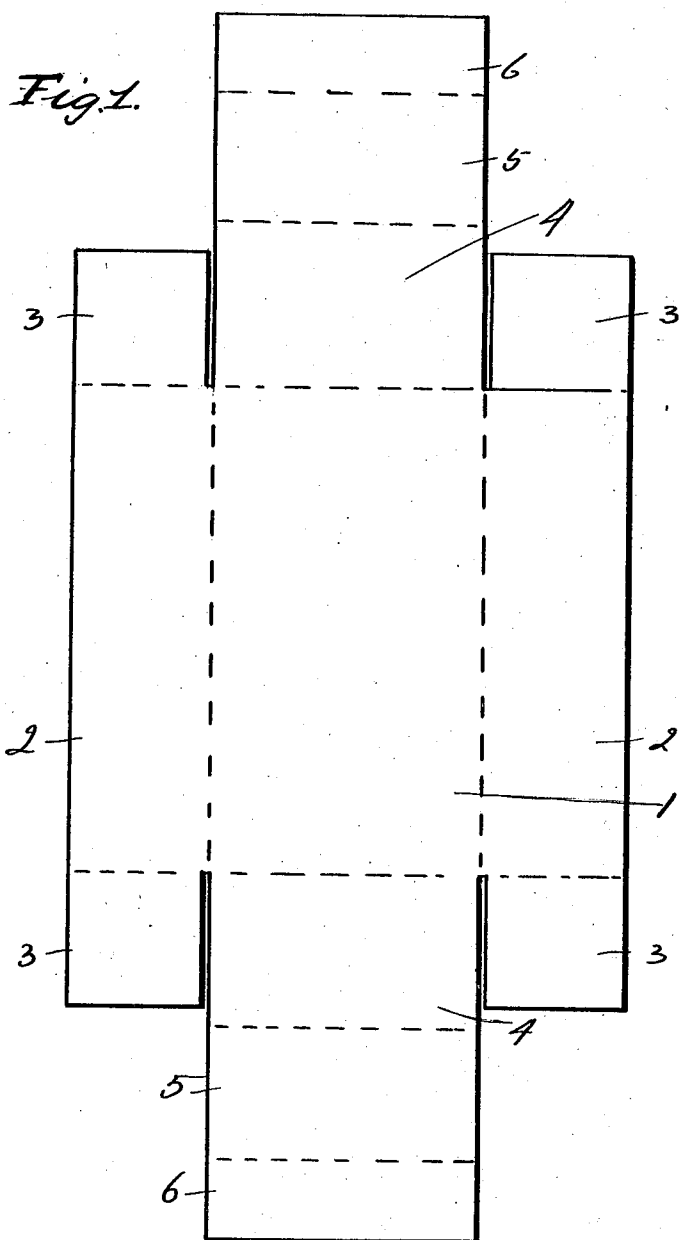
1,455,321

G. W. CASE ET AL

METHOD OF MAKING LOOSE WRAPPED FOLDING BOXES

Filed Sept. 23, 1922

4 Sheets-Sheet 1



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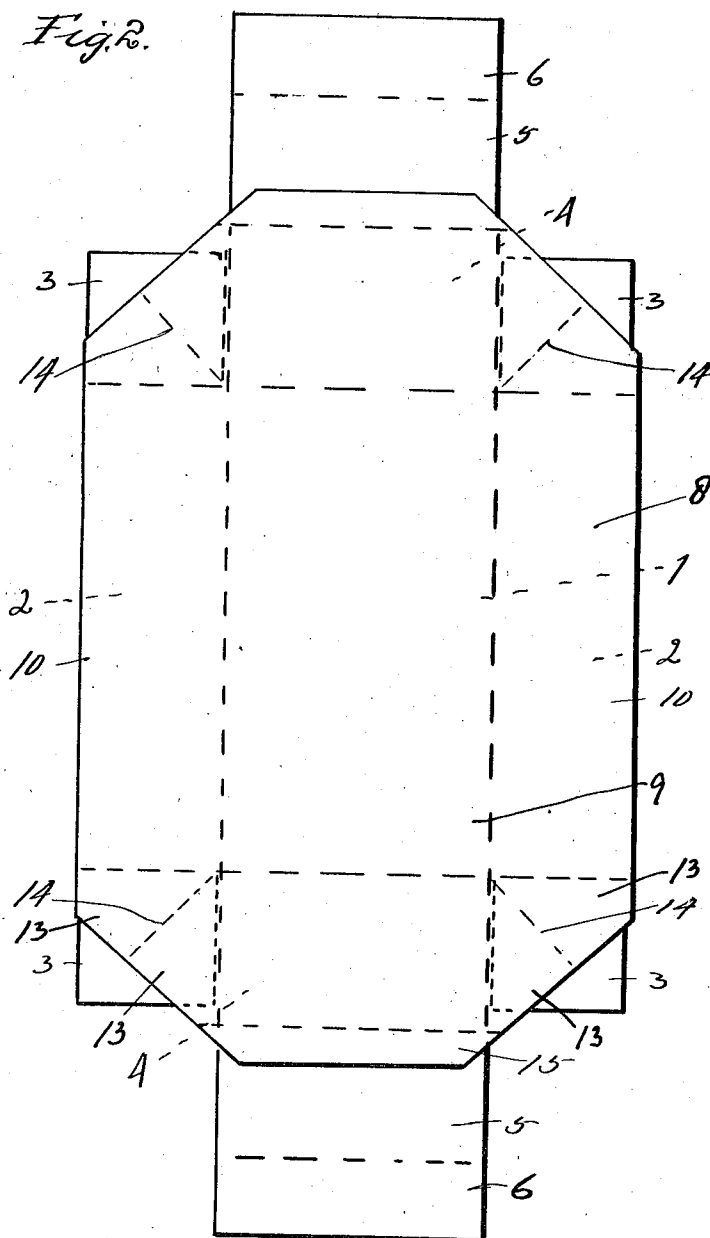
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Fig. 3.

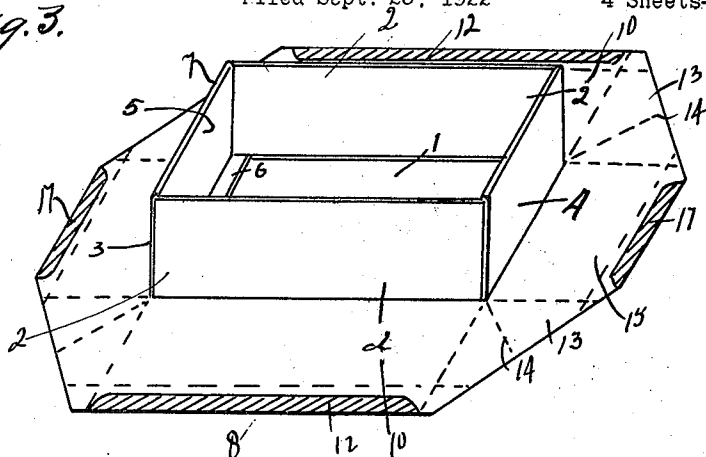


Fig. 4.

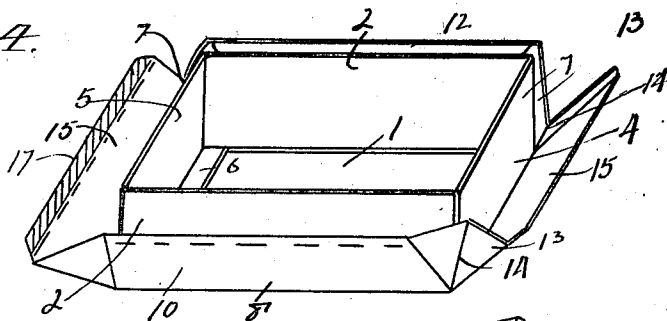


Fig. 5.

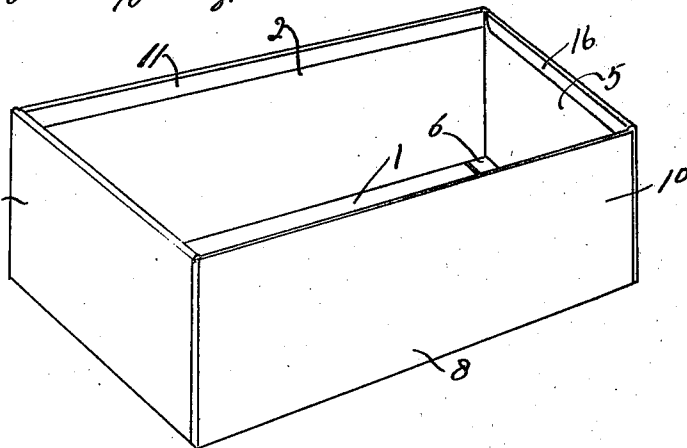
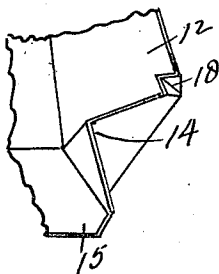


Fig. 8.



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Fig. 6.

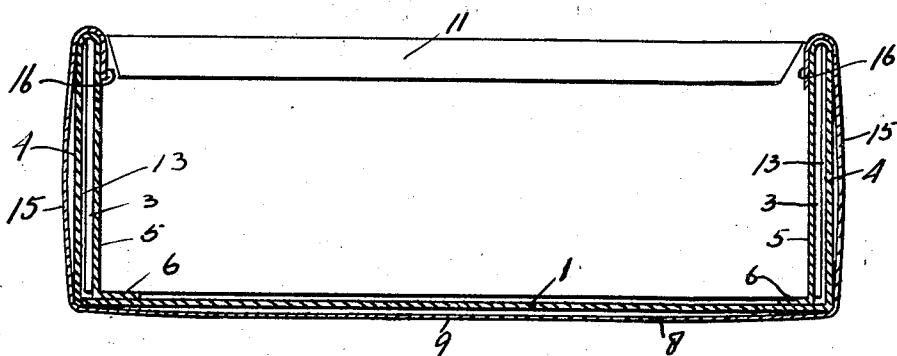
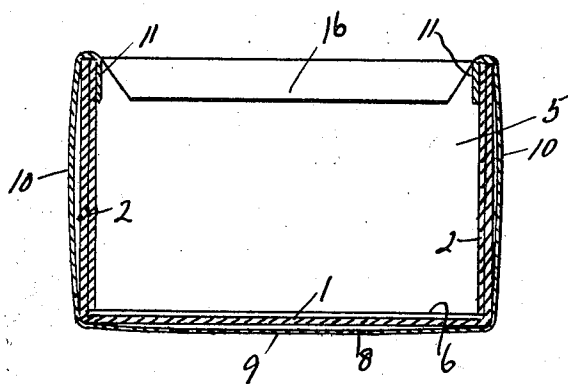


Fig. 7.



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UNITED STATES PATENT OFFICE.

GEORGE W. CASE AND JOHN WM. ROBERTS, OF PASSAIC, NEW JERSEY.

METHOD OF MAKING LOOSE-WRAPPED FOLDING BOXES.

Application filed September 23, 1922. Serial No. 589,978.

To all whom it may concern:

Be it known that we, GEORGE W. CASE and JOHN W. ROBERTS, citizens of the United States, residing at Passaic, in the county of Passaic and State of New Jersey, have invented a new and useful Method of Making Loose-Wrapped Folding Boxes, of which the following is a specification.

Our invention relates to a new and useful method of making loose wrapped folding boxes, and has for its object the application of a covering of loose wrapper to a folding box in such manner that when the box is unfolded and thereafter refolded certain portions of the wrapper will be transferred from their original positions to different positions relative to the box.

A further object of our invention is to use a made up folding box as a form around which to fold the wrapper in such manner that when the box is unfolded the wrapper will unfold therewith so that both the box blank and the wrapper may lie flat for shipment.

In order that those skilled in the art to which this invention appertains may understand how to use the same we have illustrated the steps of the process in the drawings forming a part of this invention, in which:—

Fig. 1, represents a blank for the formation of a box of proper folding thereof.

Fig. 2, shows the box blank after the loose wrapper has been attached thereto.

Fig. 3, is a perspective showing a folded box placed in position upon the wrapper prior to the latter being folded around said box.

Fig. 4, is a perspective showing the wrapper being folded around the box.

Fig. 5, shows the box after the wrapper has been completely folded around the same and attached thereto at certain points.

Fig. 6, is an enlarged longitudinal central section of Fig. 5.

Fig. 7, is a cross section of Fig. 5.

Fig. 8, is a broken away perspective showing one of the inset folds of the wrapper illustrating the manner of forming a bellows fold of that portion of said wrapper lying between the right angle formed by the meeting of the web sections and the side wings.

Heretofore to produce a loose wrapped box it has been necessary to use a set up or

permanently formed box and to enclose the same in a loose wrapper attaching the edges of said wrapper to the inside surfaces of the sides and end of the box by adhesive material and such method precluded the possibility of utilizing a loose wrapper upon a folded box. To overcome this difficulty and to provide a method by which a loose wrapper could be attached at certain points to a folding box in such manner that the box may be unfolded into the original form of its blank while maintaining the loose wrapper in proper relative position to the blank that when said blank is refolded in box shape portions of the wrapper would assume different positions relative to the sections of the box we place a folding box in its made up shape upon a wrapper fold, the wrapper around this box in its completed shape attaching certain portions of the wrapper to certain portions of the box then by unfolding the box the blank from which the latter is made will carry with it the wrapper and then when refolding the box said wrapper will assume the proper position about the box intended for commercial use.

In carrying out this process we may use any suitable box blank which we have here shown in Fig. 2, a blank especially adapted for use in this connection which blank consists of a central section 1, side sections 2 said side sections either being of a single layer of material as here shown or a double layer as is sometimes used and these side sections have end extensions 3 formed therewith while the central section also has the end sections 4 formed therewith with which latter are formed the infolding sections 5 terminating in the locking strips 6, such a blank when properly folded will produce the box indicated at 7 in Figs. 3 and 4, and the first step in our process consists in placing this box upon the wrapper 8 so that the central section 1 of the box will lie upon the central section 9 of the wrapper while the second step is the folding of the wrapper around the box so that the side wings 10 thereof will cover the outer surfaces of the side sections of the box, the edges of said wings being turned inward against the inner surface of said side sections and attached thereto by suitable adhesive material as indicated at 11, in Fig. 7.

The position of the adhesive material upon the wrapper for this attaching is indi-

cated at 12. During this folding of the wrapper around the box the triangular sections 13 are folded inward upon the lines 14 to form inset folds which during this portion of the process lie against the outer surface of the end sections 4 of the box while the end wings 15 of the wrapper enclose these inset folds the outer edges of said wings being turned over the upper edges of the ends of the box and attached to the inner surface of the infolding sections 5, as indicated at 16; an adhesive material for this attaching being indicated at 17.

This folding of the wrapper around the box leaves as a surplus a portion of the wrapper at each corner of the box where the edges of the side wings and the webs come together and this surplus is taken care of by turning inward to form a bellows fold 18 each of which in the completed box lies in the inside corner of the box between the end extensions 3 and the infolding sections 5; thus when the box is unfolded these bellows folds will be expanded to permit the blank to lie flat.

After the wrapper has been folded around the box and caused to be attached thereto as above described the next step in our process is the unfolding of the box to cause the inset folds to be withdrawn from between the end sections 4 and the end wings 15, while the next and final step in our process is the refolding of the box to cause the inset folds to assume their proper positions between the end extensions 3 and the end sections 4, as shown in Fig. 6, this producing a loose wrapped folded box ready for commercial use.

While we have shown and described a particular kind of folding box and a definite form of wrapper as well as the process in detail it is not our intention to limit our invention to any form of box or wrapper nor to the minor details of the process as these may be varied within the limits of the ap-

ended claims without departing from the spirit of our invention.

Having thus fully described our invention, what we claim as new and useful is:—

1. The process of forming a loose wrapped folded box consisting of enclosing a folded box within a wrapper, attaching certain edges of said wrapper to said box and unfolding and refolding said box for the transfer of certain folds in the wrapper from one position to another relative to the sections of the box.

2. The process of manufacturing boxes consisting of folding a blank into box shape and placing said box upon a wrapper blank folding said wrapper blank around the box in such manner as to form inset folds, attaching certain edges of said wrapper blank to certain portions of said box, unfolding the blanks to withdraw the inset folds from their original positions and finally refolding the blanks to cause the inset folds to assume different positions from that in which they were originally folded.

3. The process of manufacturing boxes consisting in applying a loose wrapper to a folding box when the latter is in its made up form, unfolding the box and refolding the same for the transfer of certain portions of said wrapper from the positions originally assumed to new positions relative to the sections of the box.

4. The process of manufacturing loose wrapped folding boxes consisting of attaching a wrapper to a box when in its folded condition, forming inset folds and bellows folds at the vertical corners and transferring the inset folds from their original positions upon the outside of the box to positions between certain sections of the box.

In testimony whereof, we have hereunto affixed our signatures.

GEORGE W. CASE.
JOHN WM. ROBERTS.