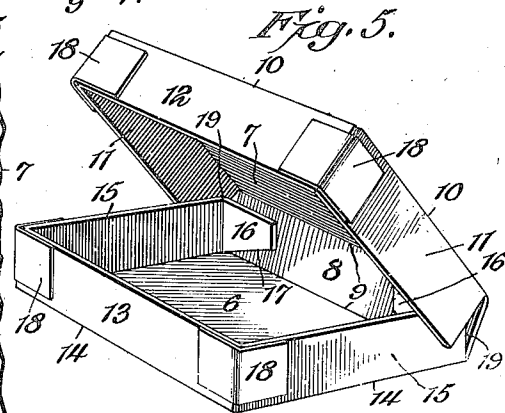
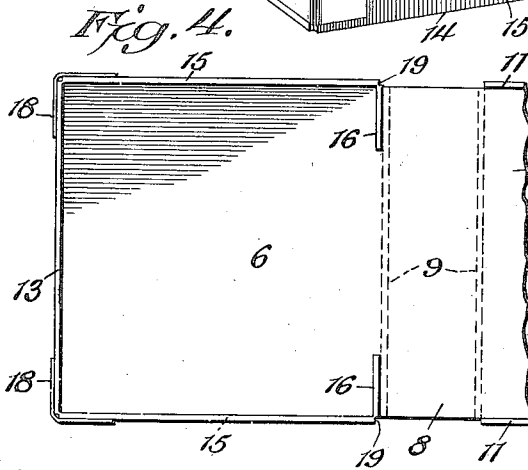
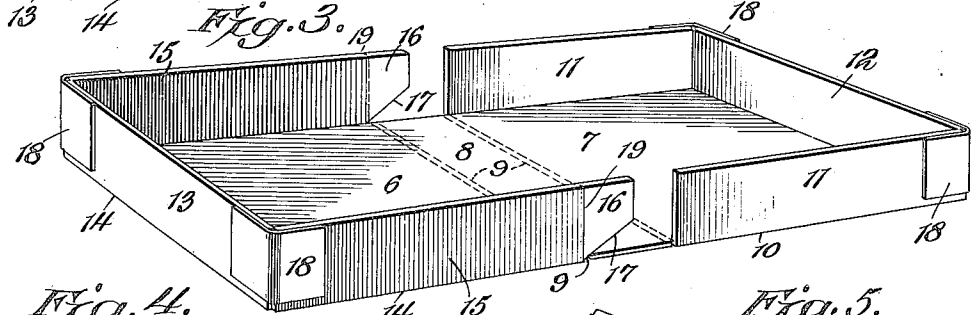
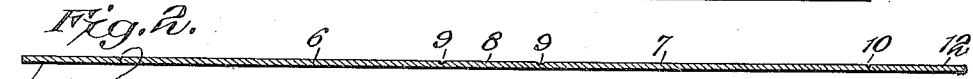
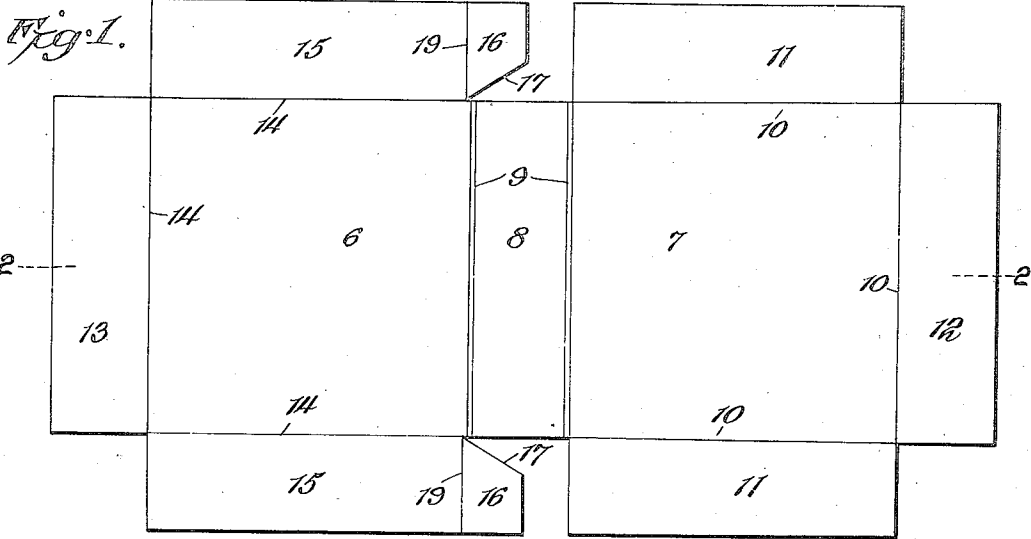


J. WAGNER, DEC'D.
 A. H. AND H. H. WAGNER, ADMINISTRATORS.
 FOLDING PASTEBOARD BOX.
 APPLICATION FILED OCT. 7, 1920.

1,420,001.

Patented June 20, 1922.



Augusta H. Wagner & Herbert H. Wagner
 administrators of the estate of
 John Wagner, INVENTOR,
 deceased.

WITNESSES

Howard D. Orr.
 Philip E. Siggers

BY

C. J. Siggers

ATTORNEY

UNITED STATES PATENT OFFICE.

JOHN WAGNER, DECEASED, LATE OF ROCHESTER, NEW YORK, BY AUGUSTA H. WAGNER AND HERBERT H. WAGNER, ADMINISTRATORS, OF ROCHESTER, NEW YORK.

FOLDING PASTEBOARD BOX.

1,420,001.

Specification of Letters Patent. Patented June 20, 1922.

Application filed October 7, 1920. Serial No. 415,413.

To all whom it may concern:

Be it known that we, AUGUSTA H. WAGNER and HERBERT H. WAGNER, citizens of the United States, residing at Rochester, county of Monroe, State of New York, administrators of the estate of JOHN WAGNER, late a citizen of the United States, and a resident of Rochester, in the county of Monroe and State of New York, deceased (as by reference to the duly-certified copy of letters of administration hereto annexed will more fully appear), do hereby declare that the said JOHN WAGNER invented a new and useful Improvement in Folding Pasteboard Boxes, of which the following is a specification.

This invention relates to folding pasteboard boxes of the type which are commonly known as one-piece boxes.

An object of the invention is to provide an improved hinge member for a one-piece folding box, which hinge is of such character that the material of the box will not break through at the hinge under ordinary usage.

Another object is to provide an improved box which is partly a set-up box in character and at the same time is a folding box.

A further object is to construct a box of the indicated character so that when the cover is folded down upon the main part of the box, it will maintain its closed position without the provision of any locking means.

A further object is to provide an improved means for supporting and forming a backing for the hinge member of the box when the cover is closed.

A still further object is to so construct the blank from which the box is made that the backing means for the hinge member will not cause breaking or tearing of the material of the box along the lower hinge line.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing in the drawing, but may be changed and modified so long as such changes and modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawing:—

Fig. 1 is a plan view of the outer side of the blank from which the box of the present invention is made, after it has been completely formed.

Fig. 2 is a longitudinal section on the line 2—2 of Fig. 1.

Fig. 3 is a perspective view of the blank after it has been set up but before it has been folded.

Fig. 4 is a fragmentary top plan view of the box after the hinge supporting tabs have been folded inwardly.

Fig. 5 is a perspective view of the box in the act of being closed.

The present box is substantially a one-piece box, being formed from a single sheet of pasteboard of rectangular form, except that it has securing means provided at the four corners. The blank in the first operation is cut in the form disclosed by Fig. 1 and at the same time is creased and scored, as will be described. The numeral 6 designates the receptacle portion of the blank, and 7 designates the cover or top portion. These two sections of the blank are joined together by a hinge section 8, which hinge section is defined by two creases 9 impressed into the pasteboard blank by a blunt instrument so that the fibers of the pasteboard are not cut or broken, but, on the contrary, are merely compressed. This compression of the pasteboard at the crease lines does not weaken the pasteboard, while allowing folding of the same along the two crease lines, so that the cover may enclose the box. The provision of these crease lines is one of the important features of the present invention.

The section 6 of the box is provided with an end flap or flange 13 and a pair of side flaps or flanges 15, all three flaps being defined by score lines 14. These score lines are made by a knife-like instrument which cuts into the material of the blank so that when the flaps are folded and the box is set up, the material of the box at the folds or corners will be separated or partly broken through, as shown in Figs. 3 and 4. The cover section 7 has side flaps 11 and an end flap 12. Score lines 10 separate the flaps 11 and 12 from the main body 7 of the cover. In this connection, it should be stated that the score lines 10 and 14 are in alinement with each other and with the ends of the hinge section

55

60

65

70

75

80

85

90

95

100

105

8. In order to give the cover sufficient dimensions to enclose the receptacle portion of the box, there is a continuous taper from the flap 13 to the flap 12 along the score lines 10 and 14. In other words, the ends of the score lines 10 adjacent the flap 12 are farther apart from each other than are the ends of the score lines 14 adjacent the flap 13. This taper in a box of the size and character indicated in the drawing may be one sixteenth of an inch.

After the blank has been cut in the manner illustrated in Figs. 1 and 2, the box is set up by a well known type of machine, this setting up process consisting in bending the flaps 11, 12, 13, and 14, at right angles to the main body of the blank so as to stand up in the position illustrated in Fig. 3. When the flaps are in this position, binding elements 18 are applied by machinery, whereupon the abutted end edges of the flaps are united together. The box is now complete except for the folding.

The flaps 15 have at those ends nearest hinge section 8, tabs 16, which tabs are separated from the flaps 15 by score lines 19. Each tab 16 is separated from the hinge section 8 by a narrow V-shaped cut 17, and this cut extends to the score line 19. The score lines 19 are offset from the adjacent crease line 9 by a distance which may approximate one sixteenth of an inch. The cut 17, therefore, extends past the crease line 9 and separates the crease line from the score lines. The effect of this construction is that any tendency on the part of the tabs to split along the score line 19 is not communicated along the adjacent crease line 9. This construction is another important feature of the present invention.

With the box in the condition illustrated in Fig. 3, all that is necessary to do is to fold the tabs 16 inwardly, as illustrated in Fig. 4, whereupon the material of the box will break along the score lines 19 sufficiently so that the said tabs will remain in their folded position. Then the cover 7 of the box is brought over into closing position as indicated in Fig. 5, whereupon the material of the box will fold along the two crease lines 9 and the cover may be brought all the way over so as to completely house the receptacle section of the box. The tapering of the score lines gives the cover section of the box sufficient dimensions so that this enclosing may take place. As will be seen from Fig. 5, the inturned tabs 16 serve as a backing for the hinge section 8 as the cover is brought down upon and closed over the receptacle.

The box of the present invention is described and claimed as though it were not covered with a paper wrapper. In actual practice, boxes of this type are very commonly provided with such a wrapper,

which is usually colored and printed with advertising matter. A wrapper designed especially for the present box is described and claimed in an application filed by Herbert H. Wagner, on October 23 1920, Serial No. 418,881. The process of uniting the present box with the improved wrapper is covered in Patent No. 1,363,024, dated December 21, 1920. The means for holding the pasteboard box during the uniting thereof with the wrapper is described and claimed in Patent No. 1,363,025, dated December 21, 1920.

The present application is a continuation in part of an application filed August 15, 1918, Serial No. 249,998.

What is claimed is:—

1. A blank for making a one-piece folding pasteboard box comprising a cover section, a receptacle section, and a hinge section joining the other two sections, all three sections being substantially rectangular; the cover and receptacle sections both having integral flanges on three sides thereof separated therefrom by score lines, the score lines extending longitudinally of the blank converging slightly and uniformly from the cover end of the blank to the receptacle end whereby the cover has sufficient width when the box is folded to enclose the receptacle.

2. A blank for making one-piece folding pasteboard boxes, comprising a cover section, a receptacle section, and a hinge section intermediate the other two sections and connected with each by a crease line, which crease lines are substantially parallel to each other, said receptacle section having side flanges and each side flange having a tab integral therewith at the end thereof adjacent the hinge section, each tab being separated from its flange by a score line, and the score line of each tab being offset from the nearer crease line, said tab being separated from the hinge section by a narrow V-shaped cut, which extends past the nearer crease line and separates the crease line from the score line, whereby the tendency on the part of the tab to split along the score line is not communicated to the adjacent crease line.

3. A blank for making one-piece folding pasteboard boxes including a receptacle section, a cover section, and a hinge section joined to the other two sections by a hinge line, the cover section having flanges integral therewith on three sides thereof, the receptacle also having flanges integral therewith and on three sides thereof, the end flange of the receptacle section and the three flanges of the cover section all being substantially rectangular in form, the two side flanges of the receptacle section each having a tab integral therewith, all of said flanges and both tabs being marked off by score lines whereby the material of the blank is

cut into, said tabs extending from the ends of the flanges to which they are attached toward the opposite ends of the side flanges of the cover section before the box is set up and folded, a cut-out portion in the blank spacing each tab from the hinge section as well as from the side flanges of the cover, the cut extending past the hinge line and separating the hinge line from the score line of the tab, the score lines of the tabs being offset from the nearer hinge line and in alignment with each other.

4. A folding pasteboard box comprising a cover section, a receptacle section, and a hinge section intermediate the other two sections joined to the same by parallel crease lines, both the cover section and receptacle section having side and end flanges adapted to be set up prior to the folding of the box, said cover section being of sufficient dimensions to enclose the receptacle section when the box is folded, tabs provided on the side flanges of the receptacle section and having score lines by which they are adapted to be bent inwardly relative to the box, said score lines being offset from the nearer crease line, said tabs together providing a backing for the hinge section when the box is folded, each tab having its lower edge inclined and spaced above the bottom of the receptacle with said space increasing as the end of the tab is approached, and with said lower edge separating the nearer crease line from the score line of the tab, the upper edge of the tab being continuous with the upper edge of the adjacent side flange of the receptacle.

5. A folding pasteboard box comprising a

cover section, a receptacle section, and a hinge section intermediate the other two sections, the material of the blank which forms the box being creased in two lines to form the hinge section, said creases compressing the blank without cutting the fibers thereof, both the cover section and receptacle section having side and end flanges adapted to be set up prior to the folding of the box, said cover section being of sufficient dimensions to enclose the receptacle section when the box is folded, tabs provided on the side flanges of the receptacle section and adapted to be bent inwardly relative to the box, the tabs being defined by score lines cutting into the material of the box, said score lines being offset from the crease line which joins the hinge section and the receptacle section, said tabs together providing a backing for the hinge section when the box is folded, each tab having its lower edge spaced above the bottom of the receptacle with said space increasing as the end of the tab is approached, the upper edge of the tab being continuous with the upper edge of the adjacent side flange of the receptacle.

In testimony, that we claim the foregoing as the invention of JOHN WAGNER, we have hereto affixed our signatures in the presence of two witnesses.

AUGUSTA H. WAGNER,
HERBERT H. WAGNER,

Administrators of the estate of John Wagner, deceased.

Witnesses:

CARLTON F. BROWN,
LAVINA J. HAAG.