July 2, 1935. J. W. TREW 2,006,780

BOX LINING

Filed July 19, 1934 2 Sheets-Sheet 1

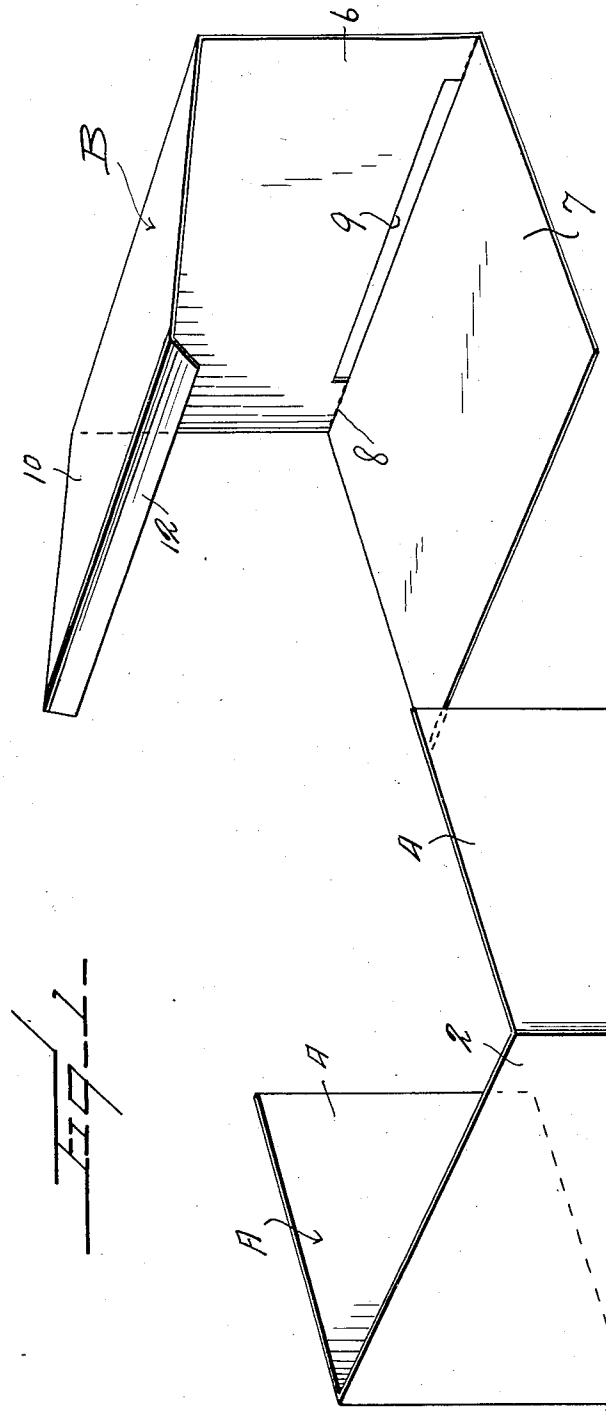


Fig. 1

Inventor

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Filed July 19, 1934 2 Sheets-Sheet 2

Fig. 4

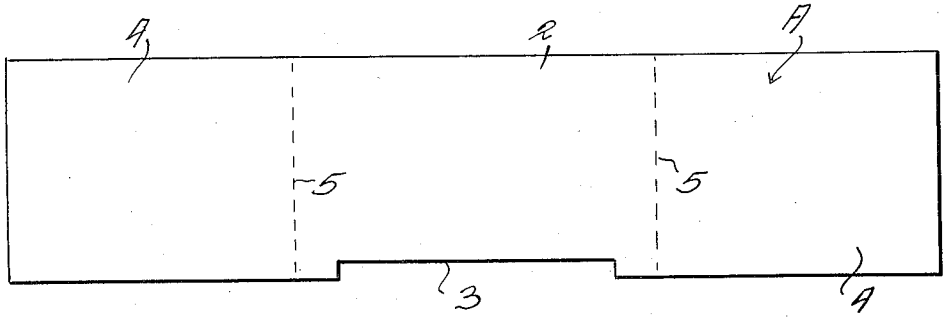


Fig. 3

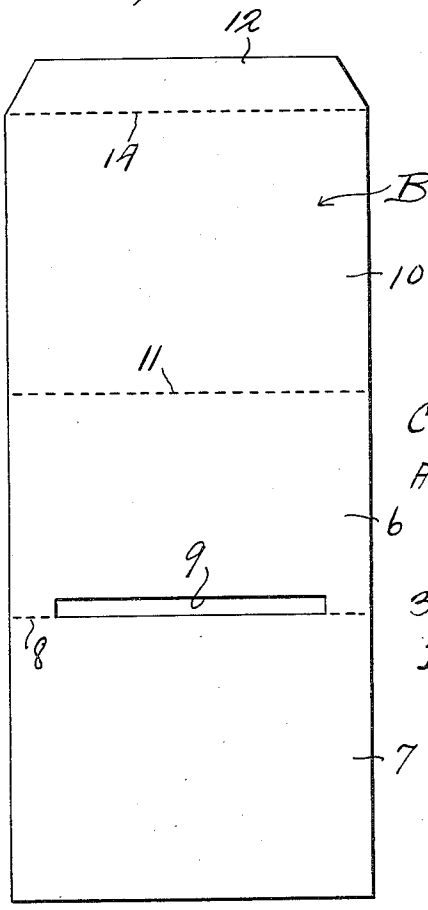
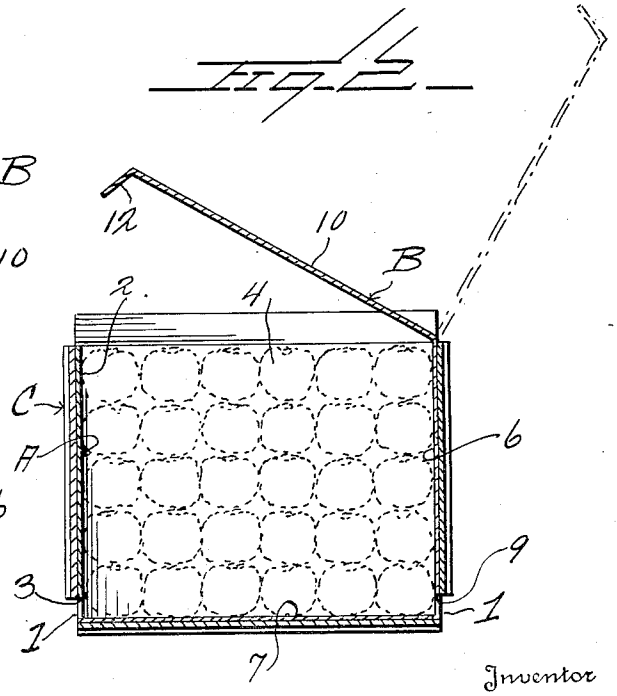


Fig. 2



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Patented July 2, 1935 2,006,780

UNITED STATES PATENT OFFICE

2,006,780

BOX LINING

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Application July 19, 1934, Serial No. 736,113

3 Claims. (Cl. 217—3)

This invention relates to improvements in linings for boxes or crates and particularly for a box or crate wherein the side and end walls are substantially in right angular relation, and it is an object of the invention to provide a lining of this kind which can be readily and conveniently applied and which when placed within a box or crate serves as a protection for the box content.

Another object of the invention is to provide a lining of this kind which in addition to protecting the box or crate content also eliminates the necessity of applying a lid or cover to the filled box or crate and wherein the lining also embodies a panel to be disposed over the bottom of the box or crate.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved box lining whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:—

Figure 1 is a view in perspective of a lining for a box or crate constructed in accordance with an embodiment of my invention, the sections being in separated relation and unapplied;

Figure 2 is a transverse sectional view taken through a box or crate having applied thereto a lining constructed in accordance with an embodiment of my invention;

Figure 3 is a view in plan of one of the lining sections as herein embodied;

Figure 4 is a view in plan of the second lining section as herein employed.

As disclosed in the accompanying drawings, my improved lining comprises two sections A and B each of which being produced from an initially flat blank of paper board or other material possessing the desired weight and quality. This lining is intended for use in connection with a box or crate C of a conventional type wherein the end and side walls are substantially at right angles and also in connection with a box or crate wherein each of the side walls terminates a slight distance above the bottom of the box or crate to provide an opening 1 for the purpose of ventilation.

The section A of my improved lining comprises a panel 2 of dimensions substantially identical with the dimensions of a side wall of the box or crate and against which side wall the panel has close contact from within. The lower marginal portion of the panel 2 for a major distance therealong is cut out or recessed, as at 3, said cut out portion or recess being of a height substantially equal to the height of the adjacent opening 1 so that the applied lining section A will offer no hindrance or obstruction to the desired circulation of air through the content of the box or crate C for the purpose of ventilation and which ventilation is desirable when the box or crate C is being used in the packing and shipping of fruits, vegetables and the like.

The ends of the side panel 2 are continued by the end panels 4 separated from the ends of the panel 2 by the score lines 5 disposed transversely of the panel 2 and along which the panels 4 readily fold or flex so as to have close contact with the inner faces of the end walls of the box or crate C. These panels 4 are preferably of a length equal to the length of the end walls of the box or crate or, in other words, of a length to extend across the end walls of the box from substantially entirely between the side walls thereof.

The section B of my improved lining comprises a side panel 6 also adapted to have close contact from within with the side wall of the box or crate C and of dimensions substantially equal to said side wall.

The lower or bottom margin of this side panel 6 is continued by a bottom panel 7 of dimensions to have close contact from above at substantially all points with the bottom of the box or crate C. This bottom panel 7 is separated from the side panel 6 by the perforated or otherwise weakened lines 8 which allow the ready flexing or folding of the bottom panel 7 and also permits said bottom panel 7 to be readily separated from the side panel 6 should it be so desired.

The lower marginal portion of the side panel 6 for a major portion therealong is also provided with a cut out portion or recess 9 for registry with an opening 1 at the lower side portion of the box or crate C for the purpose of ventilation.

The upper marginal portion of the side panel 6 is continued by a top panel 10 separated from the panel 6 by a perforated or weakened line 11 which permits the desired ready flexing or folding of the panel 10 and also allows said panel 10 to be readily separated from the panel 6 as may be desired. This panel 10 is adapted to swing across the upper portion of the box or crate C over the content thereof and its outer free marginal por-

tion is continued by a flap 12 which may be inserted between the panel 2 of the section A and the box or crate content or between said panel 2 of the section A and the adjacent side wall of the box or crate. By this means the panel 10 will be effectively held in closed position as the lateral pressure of the box or crate content upon the inserted flap 12 will materially facilitate the maintenance of the top panel 10 in desired closed position.

The top panel 10 serves to effectively close the normally open top of the box or crate C in a manner to assure desired protection of the content of the box or crate C and, therefore, with the use of my improved lining it is not necessary that the conventional lid or cover be applied to the box or crate C although of course this can be done if desired.

The flap 12 is also preferably separated from the panel 10 by a perforated or other weakened line 14 to permit the separation of the flap if it should be so desired.

In practice, when it is desired to display the content of the box or crate C it is only necessary to separate the top panel 10 along the line 11 separating said top panel 10 from the side panel 6. It is also believed to be obvious that if it is desired to omit the use of the bottom panel 7 the same may be readily removed as is also true in connection with the flap 12.

From the foregoing description it is thought to be obvious that a box lining constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and employed, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:—

1. A lining for a box or crate comprising two separated sections each formed from an initially flat blank of material of required flexibility, one section having a side panel for contact from within with a side wall of the box or crate, a bottom panel carried by the lower marginal portion of said side panel for contact from within with the bottom wall of the box or crate, said side panel being of an area substantially the same as the side wall of the box or crate and the bottom panel being of an area substantially equal to the area of the bottom wall of the box or crate, said side panel being free of end panels; the second section comprising a side panel for contact from within with the second side wall of the box or crate and of an area substantially equal to the area of said side wall, and end panels carried by the side panel of the second section for contact from within with the end walls of the box or crate, each of said end panels being of an area substantially the same as the area of its associated end wall of the box or crate.

2. A lining for a box or crate comprising two separated sections each formed from an initially flat blank of material of required flexibility, one section having a side panel for contact from within with a side wall of the box or crate, a bottom panel carried by the lower marginal portion of said side panel for contact from within with the bottom wall of the box or crate, said side panel being of an area substantially the same as the side wall of the box or crate and the bottom panel being of an area substantially equal to the area of the bottom wall of the box or crate, said side panel being free of end panels; the second section comprising a side panel for contact from within with the second side wall of the box or crate and of an area substantially equal to the area of said side wall, end panels carried by the side panel of the second section for contact from within with the end walls of the box or crate, each of said end panels being of an area substantially the same as the area of its associated end wall of the box or crate, and a top panel connected with the upper marginal portion of the side panel of one of the sections, said top panel being of an area to substantially entirely overlie the top of the box or crate and its content when said top panel is in closed position.

3. A lining for a box or crate comprising two separated sections each formed from an initially flat blank of material of required flexibility, one section having a side panel for contact from within with a side wall of the box or crate, a bottom panel carried by the lower marginal portion of said side panel for contact from within with the bottom wall of the box or crate, said side panel being of an area substantially the same as the side wall of the box or crate and the bottom panel being of an area substantially equal to the area of the bottom wall of the box or crate, said side panel being free of end panels; the second section comprising a side panel for contact from within with the second side wall of the box or crate and of an area substantially equal to the area of said side wall, and end panels carried by the side panel of the second section for contact from within with the end walls of the box or crate, each of said end panels being of an area substantially the same as the area of its associated end wall of the box or crate, the lower marginal portions of the side panels of the sections between the ends thereof being cut out to provide ventilating openings.

JAMES W. TREW.