May 16, 1933. A. E. KEPPLER 1,909,473

DISPLAY BOX

Filed May 25, 1932

Fig. 3.

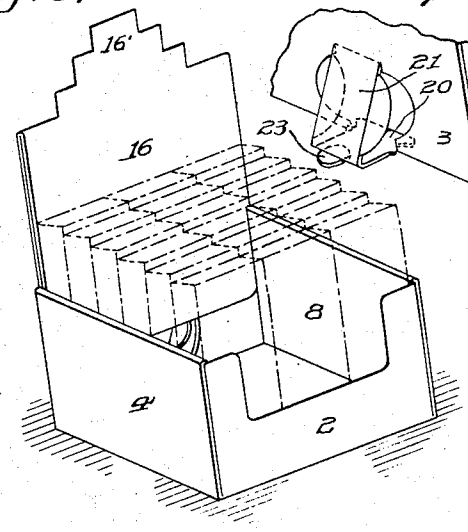


Fig. 4.

Fig. 2.

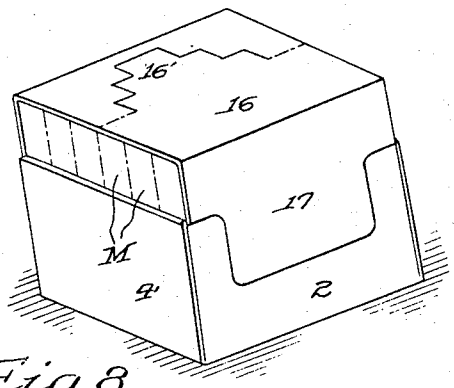


Fig. 8.

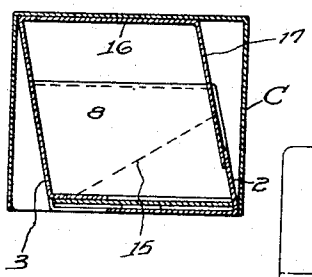


Fig. 5.

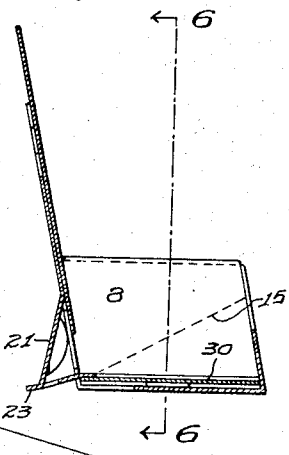


Fig. 6.

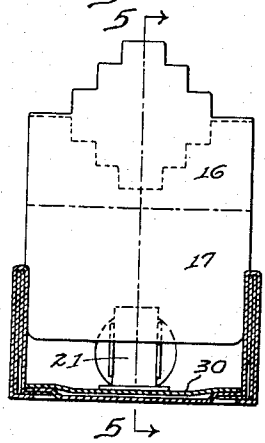
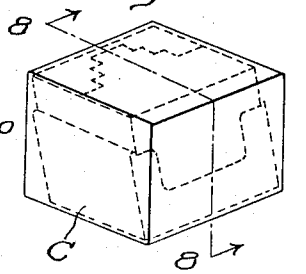


Fig. 1.

Fig. 7.



WITNESS

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Patented May 16, 1933

1,909,473

UNITED STATES PATENT OFFICE

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DISPLAY BOX

Application filed May 25, 1932. Serial No. 613,389.

The principal object of my invention is to provide a novel form of box constructed from a single sheet of cardboard or the like adapted to contain articles of merchandise and so designed as to attractively and effectively display the latter when the box is placed on a counter or other support.

A further object is the provision of a blank of cardboard or the like so cut and scored that it may be folded to form a box adapted to be filled with merchandise by the manufacturer thereof and then shipped, preferably while enclosed in an outer container, to the retailer who, upon receipt and after removal of the shipping container if employed, can then readily arrange the box for the display of the goods without removing the latter therefrom.

A still further object is the provision of a box of the character aforesaid which does not require the use of an adhesive or mechanical means such as staples, eyelets, or the like, to hold the various parts in proper relation with each other after they have been bent up from the flat blank to form the box, and which therefore may be placed in proper condition to receive the merchandise in a minimum of time and with a minimum of trouble.

Other objects, advantages, and novel features of design, construction, and arrangement comprehended by the invention will be hereinafter more particularly pointed out or apparent to those skilled in the art from the following description of a box constructed in accordance therewith and illustrated in the accompanying drawing.

In the said drawing, Fig. 1 is a plan view of the cut and scored blank from which the box is formed, which is designed to be shipped flat by the box manufacturer to the merchandise manufacturer; Fig. 2 is a perspective view of the box as it appears after being formed up from the blank of Fig. 1 and filled with goods preparatory to shipment by the merchandise manufacturer to the retailer; Fig. 3 is a perspective view of the box after it has been placed by the retailer in proper position to display the goods, which latter are indicated in both of these figures by broken lines. Fig. 4 is a fragmentary detail perspective view of the back of the box shown in Fig. 3; Fig. 5 is a vertical longitudinal section through the box as shown in Fig. 3 but with the goods removed and on the line 5—5 in Fig. 6, while Fig. 6 is a vertical transverse section on the line 6—6 in Fig. 5. Fig. 7 is a perspective view of the box on a smaller scale than as shown in Fig. 2 housed in a shipping container, while Fig. 8 is a longitudinal section on the line 8—8 in Fig. 7 but on the same scale as Figs. 5 and 6. The same characters of reference are used to designate the same parts in the several figures.

The blank of cardboard or other suitable material shown in Fig. 1 from which the box is made comprises portions designed to form the box bottom 1, front 2, back 3, and sides 4, 5, all attached to and surrounding the bottom and defined therefrom respectively by the scored line *a*, *b*, *c*—*c*. All of these several parts are rectangular save the front, which is desirably cut out as at 6 so as to more effectively show the goods when disposed in the box. Extending laterally outward from the sides 4, 5 are inner side panels 7, 8 which are of substantially similar size and configuration as the sides to which they are respectively attached and defined therefrom by the scored lines *d*—*d*. It will be noted that the upper and lower edges of the sides 4, 5 considered in the position in which the blank is shown in the drawing are upwardly inclined with respect to the scores *c*—*c* and the upper and lower edges of the side panels 7, 8 correspondingly downwardly inclined with respect to the scores *d*—*d*, the angularity of these edges with respect to the said scores determining the rearward inclination of the front and back of the box with respect to the vertical when it is formed up as hereinafter described. At the respective outer extremities of the side panels are locking flaps 9, 10 defined from the side panels by the score lines *e*—*e*; these locking flaps are of the same length as the side panels measured vertically of the drawing but are of considerably less width measured laterally thereof. On opposite sides of the front 2 are guide flaps 12, 13 respectively de-

fined from the front by the score lines *f*—*f*; the upper and lower edges of these flaps are arranged at the same angle to the scores *f*—*f* as are the corresponding edges of the sides 4, 5 but are arranged to extend in an opposite direction with respect to the score *b*. In length, measured along the said upper and lower edges, these flaps desirably approximate the length of the scores *c*—*c* and their outer edges are made parallel to the scores *f*. Other guide flaps 14, 15 extend laterally outward from the opposite sides of the back 3, being defined therefrom by the scored lines *h*—*h* and separated from the sides 4, 5 by cuts *i*—*i*; these flaps are of substantially the same width measured along the scores *h*—*h* as are the flaps 12, 13 measured along the scores *f*—*f*; their upper and lower edges are oppositely inwardly inclined at the same angles with relation to the scores *h* as are the upper edges of the guide flaps 12, 13 and the lower edges of the side panels 4, 5 respectively, so that each of the guide flaps 14, 15 approximates in shape a truncated triangle whose base is formed by the adjacent score *h*, the upper and lower edges of these flaps being approximately the same length as the corresponding edges of the flaps 12, 13.

It will be noted that the back 3 is considerably wider, measured vertically in the drawing, than the front 2, its outer edge being defined by the scored line *j*. Beyond this line is an inner back panel 16 of substantially the same size as the back 3, its outer extremity being defined by the scored line *k* beyond which is a tongue 17 of somewhat less width, measured in the same manner, than the adjacent panel 16. Preferably, the latter is transversely scored inwardly from its opposite edges for a short distance along the lines *l*—*l* midway between the scores *j*, *k*, and from the inner ends of these lines is then cut through with a zigzag or other cut *m* to define a tab 16′.

To assist in supporting the back of the box when in display position, the bottom 1 and back 3 are desirably cut and scored as now to be described in order to provide an easel or support adjacent the lower edge of the back; to this end, the bottom 1 is cut through inwardly from the scored line *a* midway of its ends to form a T-shaped tongue 20 preferably having small outwardly projecting generally triangular ears 20′ adjacent its head, while on the opposite side of this line the cuts defining the sides of the tongue are continued into the back 3 in parallel relation for a short distance, then oppositely bowed outwardly as at *n*—*n*, and finally again brought into parallelism and their extremities connected by a scored line *o*, scores *p*—*p* being also made across the bases of the cuts *n*—*n* so that a portion 21 in the back 3 is defined by these several cuts and scores. Additionally, oppositely disposed locking tabs 22, each of which is formed by a crescent-shaped cut and a score connecting its ends, are provided in the bottom 1 adjacent the scores *c*—*c*, and a similar tab 23 may be cut in the tongue 20 adjacent the score *a*.

The blank when cut and scored in the manner just described is in condition to be formed up into the box preparatory to receiving the merchandise it is intended to contain, and is thus adapted to be shipped flat by the box maker to the manufacturer of that merchandise. When received by the latter, the blank is formed up substantially in the manner now to be described, to wit, the flaps 12, 13 are bent up along the scores *f*—*f* substantially normal to the front 2 and the latter then bent up along the score *b* substantially normal to the bottom 1. The flaps 14, 15 are also bent oppositely inwardly along the scores *h*—*h* and the back 3 then bent up substantially normal to the bottom along the score *a*, thus bringing the flap 14 adjacent the flap 12 and the flap 15 adjacent the flap 13. The side panels 7, 8 are then bent upwardly along the scores *d*—*d* and the sides 4, 5 bent inwardly respectively against the flaps 12, 14 and 13, 15 along the scores *d*—*d*, after which the side panels are folded down over the said flaps and the locking flaps 9, 10 tucked beneath the tabs 22. The extension 16, now about to form the top of the box, is then bent forwardly along the score *j* and the tongue 17 similarly forwardly and downwardly bent along the score *k*, thus placing the box in position to receive the merchandise which may be in the form, as shown, of a plurality of small rectangular packages M adapted to be stacked on end in the box. However, before placing the merchandise in the box and closing the top and the tongue 17 thereover as shown in Fig. 2, I prefer to place in the bottom of the box a rectangular piece of cardboard 30 of sufficient size to completely overlay the bottom, the back edge of this auxiliary bottom, if it may be so termed, being inserted beneath the tab 20 which is first slightly bent upwardly along the score *a*, as the principal function of the auxiliary bottom is to prevent the tab being accidentally pushed outwardly with respect to the main bottom 1 while the box is being filled or afterward when being arranged for display purposes; its use is therefore optional but is preferred not only for the reason stated but also because it makes a neat finish and conceals the tabs 22 and adjacent locking flaps from view.

After the merchandise is stacked in the box and the top 16 and tongue 17 turned down in the proper position thereover, the box presents the appearance shown in Fig. 2, the dimensions of the various parts being desirably so calculated that the top 16 will lie on the upper ends of the articles within the box, the upper parts of said articles be visible above the sides of the box, and the tongue 17 ex-

tend below the lower edge of the cut out section in its front.

The filled box is now in condition for shipment and for this purpose is preferably covered by a shipping case or container C, open at the bottom and of such dimensions as to snugly receive the box. Since the front and back of the latter are correspondingly rearwardly inclined with respect to the bottom 1, while the sides 4, 5 are vertical with respect thereto when the box is resting on its bottom, it will be apparent as shown in Fig. 7 that when the box is disposed in the rectangular container, the front and back of the box will be spaced from the corresponding walls of the container in accordance with their particular degree of angularity, so that there is a certain amount of lost space within the container adjacent the front and back of the box, thus necessitating the use of a container of considerably larger volumetric capacity than the corresponding capacity of the box which it is designed to hold. This container forms no part of the invention and may be utilized or not as desired, though it is generally preferred to employ it as, among other things, it facilitates the packing of the filled boxes in rectangular cases for subsequent transportation.

Upon receipt of the box by the retailer by whom the goods contained therein are to be displayed and sold, the shipping container is first removed, the tongue 17 and top 16 raised away from the goods, and the top then folded along the scores *l—l* so as to project the tab 16′ above them as shown in Figs. 3 and 6, thus making an attractive display feature; the tongue 17 is then tucked down behind the goods. In order to provide an additional support for the back, that portion 21 thereof defined by the cuts *n—n* is then pulled out, conveniently by grasping the tab 23, until further movement of the T-shaped tongue 20 is arrested by contact of its head with the adjacent portion of the back, the tongue during this movement sliding over the upper surface of the auxiliary bottom 30 and the ears 20′ snapping behind the back 33 so as to prevent the tongue from subsequently sliding back to its original position. The segmental ears defined by the scores *p—p* are then bent inwardly substantially at right angles to their original position as best shown in Fig. 4, thus adding to the rigidity of the part 21 and correspondingly enhancing the support it affords to the back 3 when arranged as shown in said figure.

It will be apparent that when the box is formed up substantially as hereinbefore described, the flaps 12, 14 lie between the side 4 and side panel 7, and the flaps 13, 15 correspondingly lie between the side 5 and side panel 8, and by engagement of their upper and lower edges in the folds or creases along the scores *c—c* and *d—d* maintain the front and back of the box in parallelism and in inclined relation to the bottom 1. As the various parts are firmly and adequately locked together without the use of adhesives or mechanical fastening means other than those afforded by the blank itself, a rigid and satisfactory container is formed which is not liable to get out of shape under the conditions of use to which it is necessarily subjected and which cannot accidentally come apart or revert to its initially unfolded condition.

While I have herein described and illustrated one embodiment of the present invention with considerable particularity, I do not thereby desire or intend to specifically limit myself thereto as numerous changes and modifications may be made therein if desired without departing from the spirit and scope of the invention as defined in the appended claims.

Having thus described my invention, I claim and desire to protect by Letters Patent of the United States:

1. A box blank comprising rectangular portions respectively adapted to form the bottom, the back, and the front of the box all arranged with their side edges in alignment, a guide flap extending laterally from each side edge of the front portion having two parallel edges disposed obliquely to said side edge, a portion adapted to form a side of the box extending from each side edge of the bottom and having two parallel edges disposed obliquely to said side edge and forming the same but opposite angle therewith as the corresponding edges of the aforesaid guide flaps, a guide flap extending laterally from each side edge of the back portion having at least one edge disposed in oblique relation to said side edge and forming therewith a similar angle as the corresponding edge of the first mentioned adjacent guide flap, and a side panel extending laterally from each side portion having two free edges in parallelism with the corresponding edges of said first mentioned guide flap.

2. A box blank comprising rectangular portions respectively adapted to form the bottom, the back, and the front of the box all arranged with their side edges in alignment, a guide flap extending laterally from each side edge of the front portion having two parallel edges disposed obliquely to said side edge, a portion adapted to form a side of the box extending from each side edge of the bottom and having two parallel edges disposed obliquely to said side edge and forming the same but opposite angle therewith as the corresponding edges of the aforesaid guide flaps, a guide flap extending laterally from each side edge of the back portion having at least one edge disposed in oblique relation to said side edge and forming therewith a similar angle as the corresponding edge of the first mentioned adjacent guide flap, a

side panel extending laterally from each side portion having two free edges in parallelism with the corresponding edges of said first mentioned guide flap, a locking flap extending laterally from each side panel, and means carried by the bottom portion for cooperation with said locking flap when the blank is bent up to form the box.

In witness whereof I have hereunto set my hand and seal this 24th day of May, 1932.

ALBERT E. KEPPLER.