Jan. 14, 1930. N. NEUMAN 1,743,681

COLLAPSIBLE BOX

Filed Sept. 27, 1927

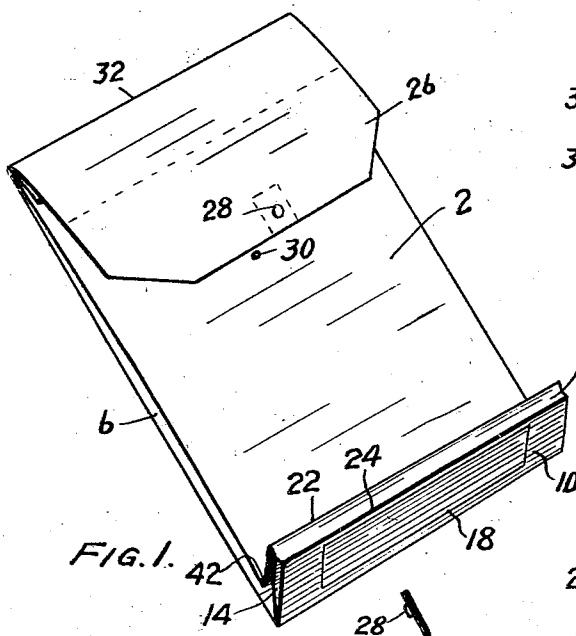



FIG. 1.

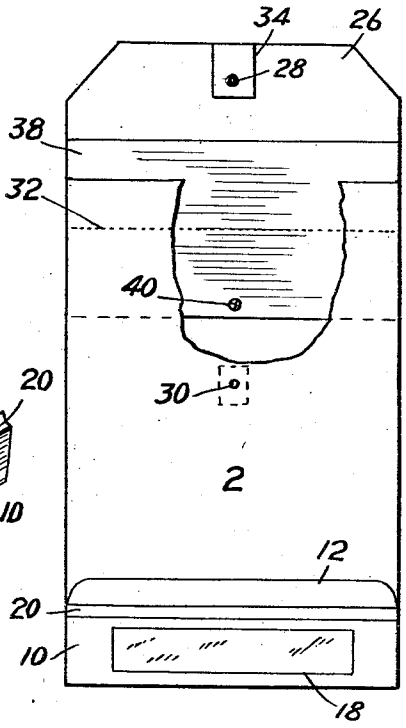



FIG. 2.

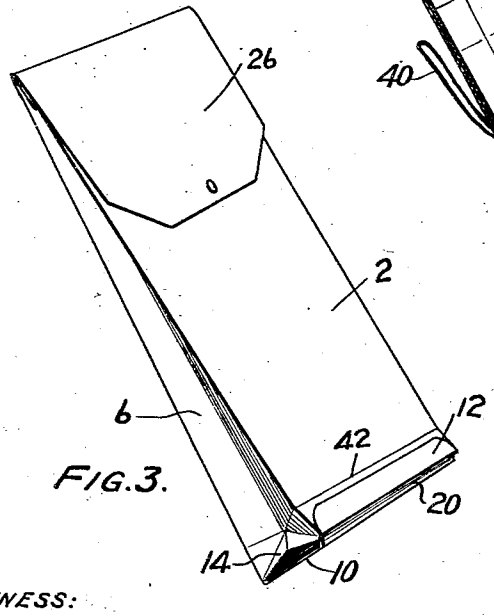



FIG. 3.

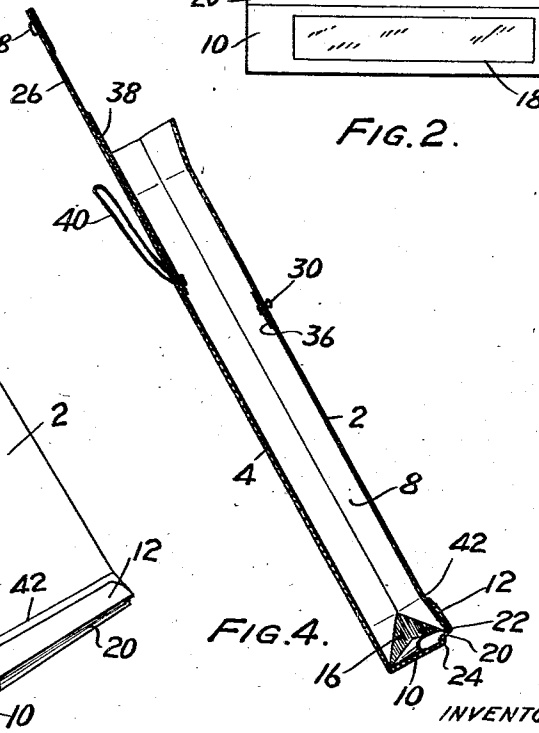



FIG. 4.

WITNESS:

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Patented Jan. 14, 1930 1,743,681

# UNITED STATES PATENT OFFICE

NATHAN NEUMAN, OF PHILADELPHIA, PENNSYLVANIA

## COLLAPSIBLE BOX

Application filed September 27, 1927. Serial No. 222,238.

This invention relates to an improved collapsible box especially adapted for the reception of material such as articles of clothing.

It is customary to supply articles of clothing for sale in pasteboard boxes having labels on the ends thereof so that when the boxes are stacked in a store, the labels will be visible to indicate the character of the goods contained in the boxes. These boxes are bulky and the storing of empty boxes takes up a considerable amount of space. It is therefore desirable, if possible, to use collapsible boxes rather than boxes which are rigidly made, so that their cubic capacity cannot be varied according to contents. In the case of collapsible boxes heretofore known, however, it has been impossible to maintain on any wall thereof, a label under such conditions that the label will not be distorted when the boxes are collapsed.

One object of this invention is to provide a box having a wall on which a label may be placed, which wall is not distorted when the box is collapsed. A further object of this invention is the provision of a container which will be proof against moths. A still further object of this invention is the provision of a container which may be sold with the articles and which may be used by the buyer as a permanent receptacle therefor.

In the drawing:

Fig. 1 is a perspective view of the improved box in a substantially collapsed condition.

Fig. 2 is a plan view of the box showing one end thereof open and having a part broken away to show the interior thereof.

Fig. 3 is a perspective view of the box showing it as it appears when full.

Fig. 4 is a longitudinal cross section of the box in open condition.

The box comprises a top wall 2 and a bottom wall 4, joined along their longitudinal edges by collapsible side walls 6 and 8, which are so formed by having a fold line therein that they may be collapsed to bring walls 2 and 4 into flat contact with each other, but which may be extended to provide a space between walls 2 and 4 adapted for the reception of an article.

Walls 2, 4, 6 and 8 may be conveniently formed from a single sheet of heavy paper having its ends cut and pasted to form a tube.

Wall 4 has an extension 10 formed at one end thereof which is adapted to form an end wall of the box when the box is in open or flat condition. This wall 10 is provided with a flap 12 which may be secured to wall 2 by adhesive or in any other suitable manner. Folds 14 and 16 of any suitable type may be provided adjacent the end wall 10 by folding the excess material to allow the box to be collapsed. The specific folds used form no part of this invention and are well known in the art and need not therefore, be specifically described.

End 10 is adapted to receive a label 18 which may contain data designating the size or type of the content of the box. Adjacent the junction of walls 2 and 10 there is formed a flexible portion 20, which is defined by two-scored folding lines 22 and 24, extending parallel to each other, the line 22 being substantially coincident with the junction of end 10 with top wall 2. Wall 10, including the flexible portion 20, is of greater extent than side walls 6 and 8, between walls 2 and 4 for a reason which will be hereinafter set forth.

At the opposite end from end wall 10, the bottom wall 4 is extended to form a closure flap 26 carrying one element 28 of a snap fastener, the coacting element 30 of which is carried by wall 2. Elements 28 and 30 engage to close the box when flap 26 is folded about the fold line 32. It will be observed that fold line 32 is located inwardly of the end of wall 2, adjacent the open end of the box, so that when flap 26 is folded over the open end a portion of wall 2 is folded therewith, as is most clearly shown in Fig. 1. Reinforcing tabs 34 and 36 are provided where snap fastener elements 28 and 30 are attached to the box.

A sheet of moth repellant material, for example, tar paper, is secured on the inside

of flap 26 and wall 4 in a position covering fold line 32, so that when the box is closed this sheet of material 38, is bent over the end thereof and will prevent the entrance of moths into the box.

The hanger loop 40 may be secured to either of walls 2 or 4 to supply a convenient means for hanging the box up if desired.

A fold line 42 is provided in wall 2 adjacent the lower end thereof, to permit the collapse of the box. As shown in Fig. 1, when the box is collapsed, walls 6 and 8 fold upon themselves bringing walls 2 and 4 substantially into contact. At the same time, the portion of wall 2 outside of fold line 42 folds down into parallelism with the end 10 about fold means 22 and 24. Subsequently, end 10 may be folded down upon wall 2 about its junction with wall 4, whereby a flat object is obtained. When the box is collapsed into this position, flexible portion 20 is substantially in the plane of end 10 and is in fully extended condition. On the other hand, end 10 lies flat so that no distortion of label 18 carried thereby is produced.

When it is desired to fill the box, it is opened up into the position shown in Fig. 4 and the contents may then be introduced through the open mouth. This type of box is especially adapted for an article such as a sweater, which is somewhat bulky but which will readily yield to pressure. The flap 26 is then closed over and the snap fastener elements engaged with each other, producing a package such as shown in Fig. 3, in which the walls 2 and 4 taper toward each other at the end adjacent the closure flap, while end wall 10 is approximately at a right angle with walls 2 and 6. The primary utility of flexible portion 20 will now be apparent. If the article contained in the box tends to bulge the walls between the side walls 6 and 8 and to extend them to a distance greater than their extensibility, flexible portion 20 allows wall 2 to bulge outwardly, while preventing, however, any inward movement of wall 10, which would tend to distort it and crease label 18. On the other hand, if another box or some other weight be placed upon wall 2, wall 2 may yield downwardly beyond fold line 24 to an ultimate position, in which fold line 22 may be considerably below line 24 to bring the flexible portion 20 in surface contact with the end wall 10. In such case again, any distortion of end wall 10 is prevented. It will be observed from the foregoing discussion that this flexible portion 20 permits either excessive outward or inward movement of wall 2 without any distortion of wall 10.

What I claim as my invention and desire to protect by Letters Patent is:

1. A collapsible box comprising top and bottom walls joined along longitudinal edges by extensible sides, and an end joining said top and bottom walls and being of greater extent between the top and bottom walls than the sides when the sides are in fully extended condition.

2. A collapsible box comprising top and bottom walls joined along longitudinal edges by extensible sides, and an end joining said top and bottom walls and being of greater extent between the top and bottom walls than the sides when the sides are in fully extended condition, one of said walls being foldable upon itself along a line spaced from the end whereby, when said foldable wall is folded upon itself along said line and the end is folded thereupon along its junction with the other wall, the end will be fully extended.

In testimony of which invention, I have hereunto set my hand, at Philadelphia, Pennsylvania, on this 26th day of September, 1927.

NATHAN NEUMAN.