Sept. 18, 1928. 1,685,016

I. B. BLAKE

FOLDING BOX

Filed April 28, 1926 2 Sheets-Sheet 1

Fig. 1.

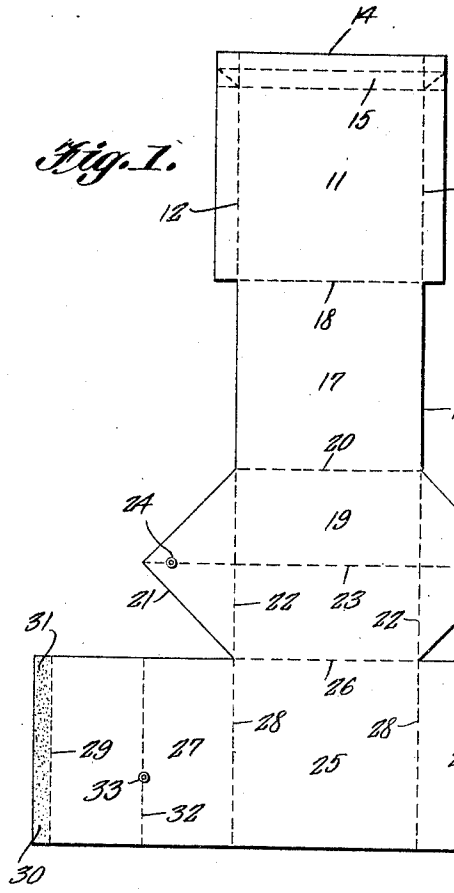


Fig. 2.

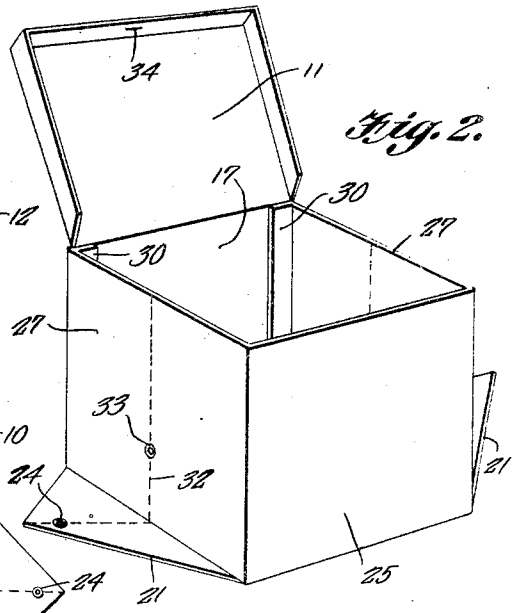


Fig. 3.

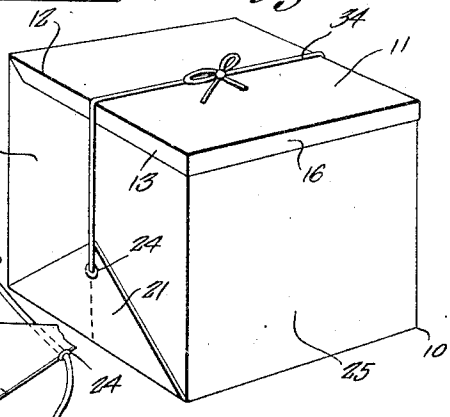
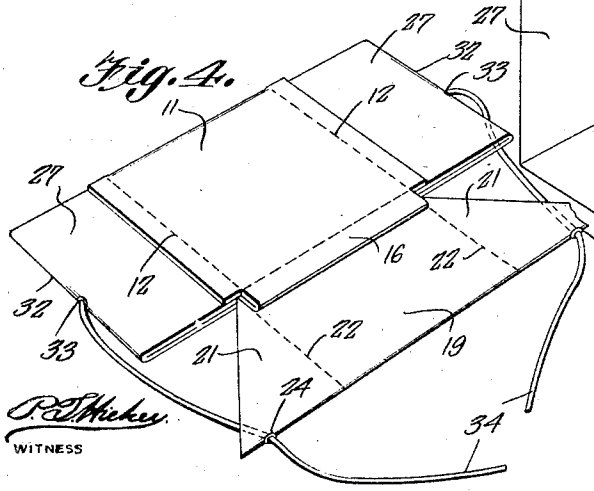


Fig. 4.



WITNESS

Isabelle B. Blake, INVENTOR

BY Victor J. Evans

ATTORNEY

Sept. 18, 1928. 1,685,016

I. B. BLAKE

FOLDING BOX

Filed April 28, 1926 2 Sheets-Sheet 2

Fig. 5.

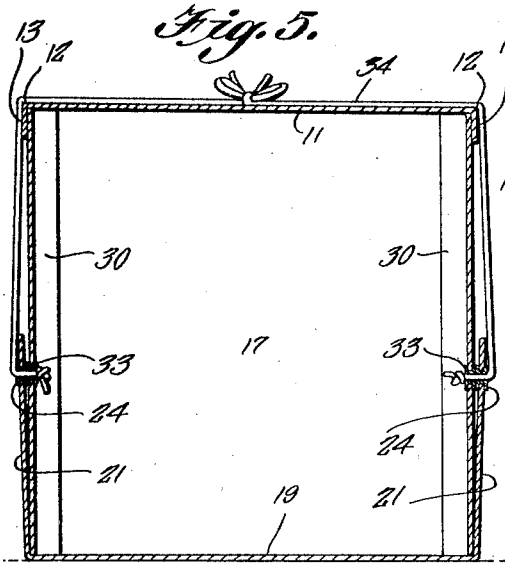


Fig. 6.

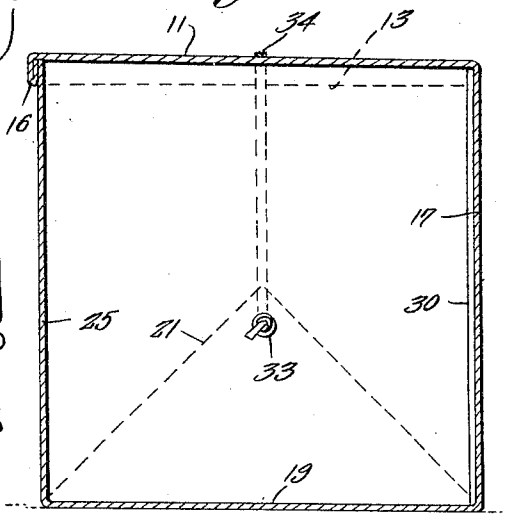


Fig. 7.

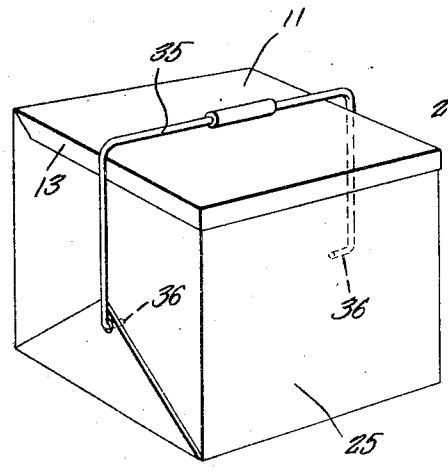
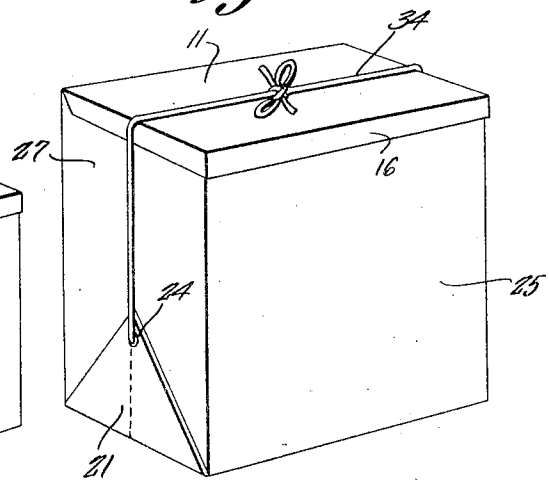


Fig. 8.



P. J. Blakey

WITNESS

Isabelle B. Blake,

INVENTOR

BY Victor J. Evans

ATTORNEY

Patented Sept. 18, 1928. 1,685,016

UNITED STATES PATENT OFFICE.

ISABELLE BRENDA BLAKE, OF NEW YORK, N. Y.

FOLDING BOX.

Application filed April 28, 1926. Serial No. 105,251.

This invention relates to improvements in folding boxes.

The primary object of the invention resides in the provision of a folding box constructed of a single blank of material so cut and scored as to provide a square box of rigid construction when in a set-up position, and which may be readily collapsed when not in use to lie in a flat condition.

Another object of the invention is the provision of a foldable box which includes a hinged cover adapted to be held down upon the body of the box by a suitable means which is employed for retaining the box in a set-up posittion.

A further object of the invention is to provide a foldable box especially adaptable to the hat trade, whereby a dealer may conveniently keep a large supply of folded boxes on hand within a limited amount of space, and which may be set up for use as the necessity arises, it being appreciated that heretofore only a limited amount of the well-known type of hat boxes could be kept on hand due to the lack of storage space.

A still further object of the invention is to provide a folding box which is simple in construction, easy to set-up and collapse, and inexpensive of manufacture.

With these and other objects in view, the invention resides in certain novel construction and combination and arrangement of parts, the essential features of which are hereinafter fully described, are particularly pointed out in the appended claims, and are illustrated in the accompanying drawing, in which:—

Figure 1 is a plan view of the blank from which my improved folding box is formed.

Figure 2 is a perspective view of the same in a partly folded condition.

Figure 3 is a perspective view in a set-up condition.

Figure 4 is a perspective view of the box in a collapsed condition.

Figure 5 is a vertical sectional view through the box in set-up position.

Figure 6 is a vertical transverse sectional view taken at right angle to that shown in Figure 5.

Figure 7 is a modified form of carrying handle.

Figure 8 is a modified form of box.

Referring more particularly to the drawings, the reference numeral 10 designates the blank from which my improved folding box is formed and which comprises a single piece of relatively heavy bendable material such as cardboard or the like. The blank in its flat condition such as shown in Figure 1 of the drawings, is relatively T-shaped and comprises a top wall or cover 11 which is scored vertically adjacent its side edges on the lines 12—12 to provide oppositely disposed side flaps 13. The cover is scored horizontally on the lines 14 and 15 to provide a front flap 16. When the flaps 12 and 16 are bent and folded as shown in Figure 2 of the drawings, the same provides a continuous flange about the free edges of the cover for a passage over the peripheral edge of the body of the box or for engagement with the inner walls of the body.

Co-extensive with the cover 11 is a rear wall 17 divided from the cover by a fold line 18 and which line serves as the hinge point for the cover, while the bottom wall 19 of the box is divded from the rear wall by a fold line 20. Pointed flaps 21 extend outwardly from the sides of the bottom wall 19 and are bendable on the vertical fold lines 22, 22 disposed in alignment with the side edges of the rear wall and with the fold lines 12, 12 of the cover. A fold line 23 extends between the points of the flaps 21 so as to permit the parts of the bottom wall to fold one over each other when the box is in a collapsed condition as shown in Figure 4 of the drawings. The flaps 21, 21, are provided with eyelets 24 for a purpose to be presently described.

The front wall 25 is divided from the bottom wall 19 by a fold line 26, while side walls 27, 27 flank the opposite sides of the front wall and are divided therefrom by vertical fold lines 28, 28. The outer edges of the side walls 27, 27 are respectively scored as at 29 to provide flaps 30 which contain an adhesive 31 for securing the side walls with the rear wall as shown in Figure 2 of the drawings. The side walls 27 are scored midway between the fold lines 28 and 29 as at 32 to divide the side walls into two foldable sections. The side walls bend outwardly on the fold lines 32 after the blank has been folded to set-up position. This serves to strengthen the side walls and prevents inward collapsing of the same.

In folding the blank 10 to form the box, the same is bent upon the scored lines so that the flaps 30 are adhesively secured to the inner faces of the rear wall. This

brings the body of the box into shape with the flaps 21 extending upward on a plane with the bottom wall 19. The flaps 21 are bent upward against the side walls 27, whereupon the eyelets 22 therein register with the eyelets 33 in the side walls. A pair of flexible lengths of tape, ribbon or cord 34 are knotted at one end and the free end of each is passed through the respective registering eyelets. The side flanges of the cover 11 are bent into position on the line 12—12, 14, and 15 so as to snugly fit over the open mouth of the body of the box. By bending the cover section upon the lines 14 and 15, a double ply of material is formed and is held together by a staple or the like 34. After the cover has been swung down over the body of the box, the free ends of the tape are carried up along the outer side walls and knotted together which serves to hold the flaps 21 parallel to the side walls 27 and further prevents accidental opening of the cover. The box may be conveniently carried by passing the hand beneath the tape as will be readily appreciated.

To collapse the box to the position shown in Figure 4 of the drawings, the ends of the tape are untied after which inward pressure is applied to the front and rear walls causing the bottom wall and the flaps 21 to fold outwardly on the fold line 19 while the side walls also fold outwardly on the fold lines 32 until the front and rear walls meet. The cover 11 is then swung down flat against the front wall thereby completing the collapse of the box. It will be seen that when the boxes are stacked in their flat collapsed condition, a relatively large quantity of boxes may be neatly stored in a limited amount of space for use as desired.

In Figure 7 of the drawings, I have shown a modified form of carrying handle which comprises a wire bail 35 having inwardly extending trunnions 36 on its free ends and which enter the registering eyelets 22 and 23. This bail may be substituted for the flexible tape shown in the preferred form. Although I have shown two wires to hold the flaps 21 against the side walls of the box, suitable clips may be passed through the registering eyelets and bent to serve the same purpose.

In Figure 8 of the drawings, I have shown a further modified form of my invention in which the identical same construction is employed as in the preferred form, with the exception that the box is of an oblong shape instead of square.

Although I have specifically mentioned that the side and bottom walls together with the pointed flaps 21, fold outwardly when the box is collapsed, it will be appreciated that the same may fold inwardly if desired without changing the construction.

While I have described what I deem to be the most desirable embodiment of my invention, it is obvious that many of the details may be varied without in any way departing from the spirit of my invention, and I therefore do not limit myself to the exact details of construction herein set forth nor to anything less than the whole of my invention limited only by the appended claims.

What is claimed as new is:—

1. A collapsible refoldable box comprising a body constituting outwardly foldable side walls, an outwardly foldable bottom wall, front and rear walls movable toward each other upon the outward folding of said side and bottom walls whereby said body may be collapsed to a flat condition, pointed flaps co-extensive with said bottom wall and foldable against said side walls when in a set-up condition, a fold line extending from the point of one flap across said bottom wall to the point of the other flap, a cover hinged to said rear wall for closing the open top of said body, said side walls and flaps having registering openings therein, and means passing through said registering openings and over said cover for holding said body in a set-up position and for keeping said cover down over said body.

2. A collapsible refoldable box comprising a body constituting outwardly foldable side walls, an outwardly foldable bottom wall, front and rear walls movable toward each other upon the outward folding of said side and bottom walls, whereby said body may be collapsed to a flat condition, pointed flaps co-extensive with said bottom wall and foldable against said side walls when in a set-up condition, a fold line extending from the point of one flap across said bottom wall to the point of the other flap, a cover hinged to said rear wall for closing the open top of said body, said side walls and flaps having registering openings therein, and means passing through said registering openings and over said cover for holding said body in a set-up position and for keeping said cover down over said body, said means comprising flexible elements having one of their ends enlarged so as not to pull through said registering openings, the free ends of said flexible elements being tied together over said cover.

In testimony whereof I have affixed my signature

ISABELLE BRENDA BLAKE.