June 18, 1929. E. H. LUPTON 1,718,204

FOLDING BOX

Filed Dec. 23, 1927 2 Sheets-Sheet 1

FIG. 1.

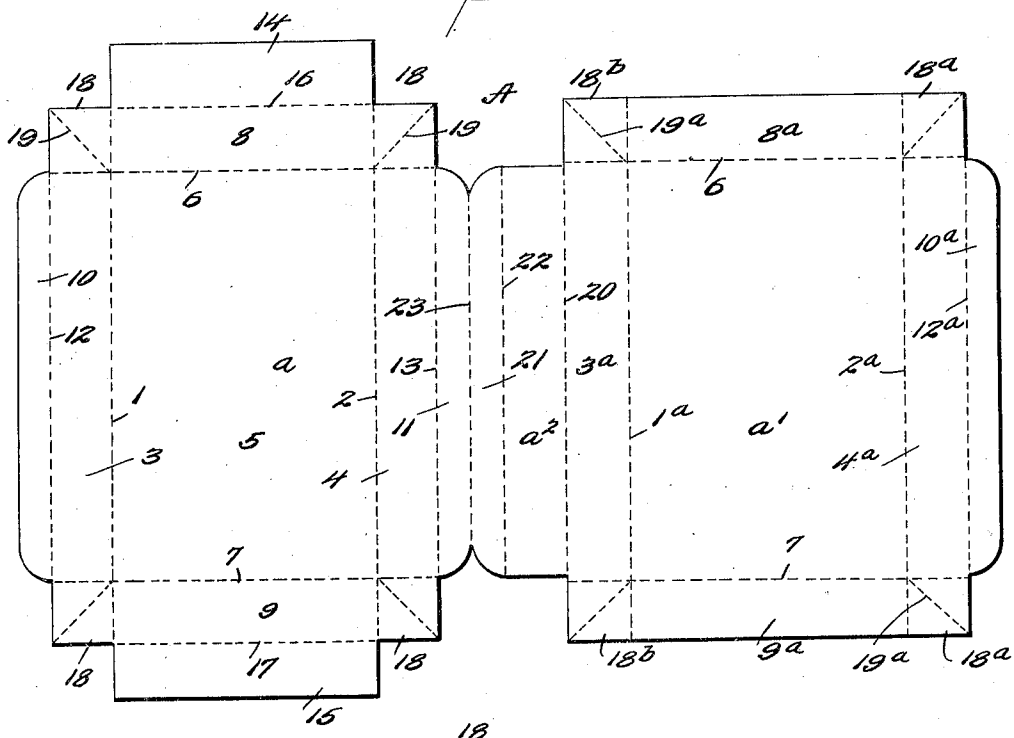


FIG. 2.

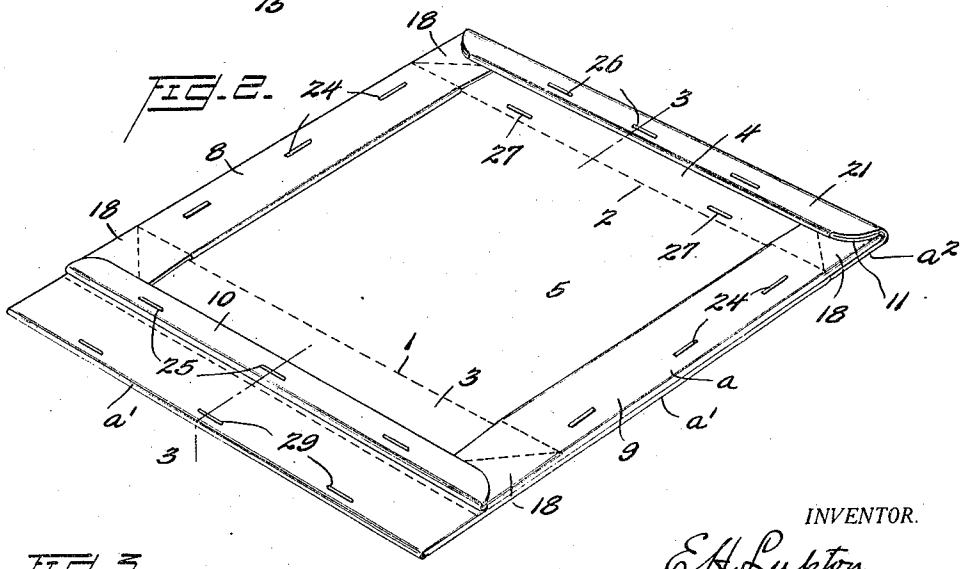
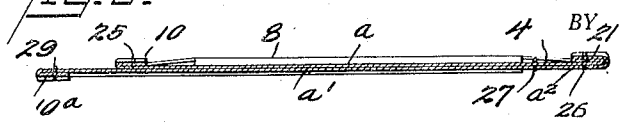


FIG. 3.



INVENTOR.
E. H. Lupton
BY
Robert Walton
ATTORNEY.

June 18, 1929. E. H. LUPTON 1,718,204

FOLDING BOX

Filed Dec. 23, 1927 2 Sheets-Sheet 2

FIG-4-

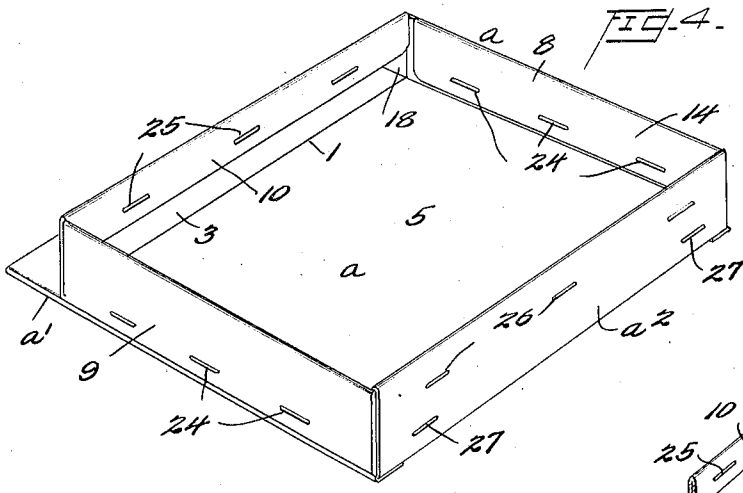


FIG-7-

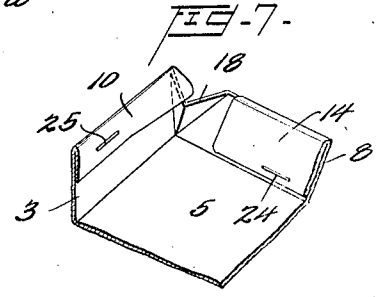


FIG-5-

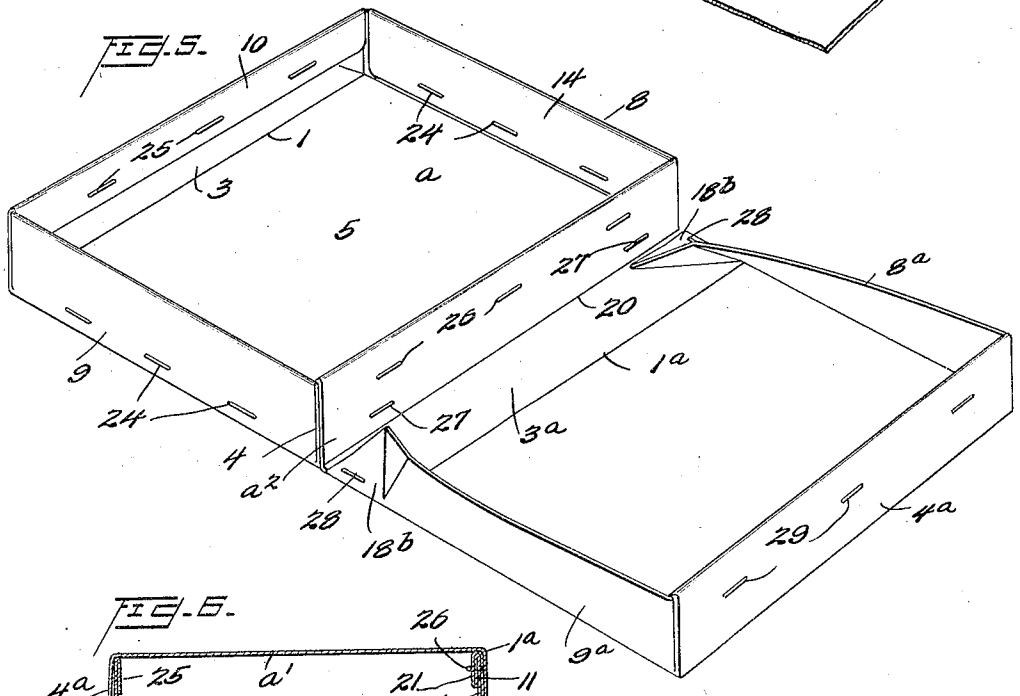
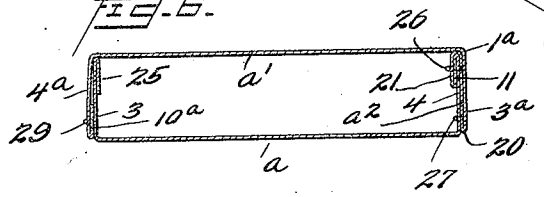


FIG-6-



INVENTOR.
E. H. Lupton
BY
Robert Merton
ATTORNEY.

Patented June 18, 1929. 1,718,204

UNITED STATES PATENT OFFICE.

ELMER H. LUPTON, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE BARTGIS BROTHERS COMPANY, OF BALTIMORE, MARYLAND, A CORPORATION OF MARYLAND.

FOLDING BOX.

Application filed December 23, 1927. Serial No. 242,089.

This invention relates to folding boxes, made of paper stock and suitable for containing suits, coats, etc. The purpose of the invention is to provide a box with attached cover which can be quickly set up or knocked down, which will fold flat for shipment, and which will occupy small space on the counter while the goods are being packed in the boxes.

The invention relates to a box of the type illustrated in my co-pending application, Serial Number 214,968; filed August 23, 1927. The box shown in the application referred to is made from two similar blanks, each creased and fastened so as to form two similar box parts, each of which may be folded flat or quickly set up, and the two parts are connected together by a flap on the top part which is fastened to the bottom part in such a way that the top part is hinged to the bottom part along the lower edge of one of the walls of the latter part.

In the present invention, the top and bottom portions of the box are made from a single blank, the top portion having a hinge-piece which is secured to a side wall of the bottom portion, and a flap connects this hinge-piece with a flap on the bottom portion.

In the accompanying drawing,

Fig. 1 is a plan view of the blank, from which the box is made, the dotted lines showing the creases in the blank to permit of folding;

Fig. 2 is a perspective view of the box, folded for shipment;

Fig. 3 is a section on the line 3—3 of Fig. 2;

Fig. 4 is a perspective view of the box with the bottom section set up for filling and the top section folded;

Fig. 5 is a similar view, with the top section unfolded and ready to be closed over the bottom section;

Fig. 6 is a transverse section through the closed box; and,

Fig. 7 is a perspective view of a corner of the box, showing the manner in which the corner-pieces fold under the adjacent side and end flaps.

Referring to Fig. 1 of the drawing, A indicates the blank from which the box is made, as a whole, a indicates the portion of the blank which forms the bottom part or section of the box, and a' indicates the portion of the blank which forms the top section of the box. These sections are connected by a part a^2 which, in the completed box, forms a hinge-piece. The bottom section a is creased longitudinally on parallel lines, as indicated at 1 and 2, so that the parts 3 and 4 may be turned upwardly at right angles to the central part 5 of the section, to form side walls. This section of the blank is also creased transversely, near its ends, as shown at 6 and 7, so that the adjacent parts 8, 9, may be turned upwardly at right angles to the base 5, to form end walls. Flaps 10 and 11 project from the side walls, and these flaps may be folded over the side walls along creased lines 12 and 13, respectively. Flaps 14 and 15 project from the end walls 8 and 9, respectively, and these flaps may be folded over the end walls along lines 16 and 17. The corner pieces 18 of the bottom section, where the side and end walls meet, are creased diagonally, as shown at 19, so that each corner-piece may fold inwardly against the inner side of the adjacent side wall when the box is set up.

The top section a' of the blank is slightly larger than the bottom section and is not provided with end flaps corresponding to the flaps 14 and 15 of the bottom section, but otherwise is the same as the bottom section. Thus, the top section has parallel longitudinal creases 1^a and 2^a to form the side walls 3^a and 4^a, and it has the creases 6 and 7 near its ends to form the end walls 8^a and 9^a. The corner-pieces 18^a and 18^b are also creased diagonally, as shown at 19^a and are adapted to fold inwardly against the adjacent side walls. The side wall 4^a is creased at 12^a to form a side flap 10^a. The hinge section a^2 projects from the side wall 3^a and can be bent at an angle to said side wall along a creased line 20. The hinge section a^2 is of approximately the same width as the side walls of the box and it is connected to the side flap 11 of the bottom section by a flap 21. As shown, the blank is creased along a line 22 between the hinge-piece a^2 and its flap 21, and the blank is also creased along a line 23, between the flap 21 and the flap 11.

In forming the box from the blank described, the end flaps 14 and 15 are folded against the end walls and secured thereto by stitches 24. These flaps are of substantially the same width as the end walls and extend to the base 5 of the bottom section when the box is set up. The flap 10 is folded against the side wall 3 and secured to it by stitches 25, the ends of the flap being free, so that the corner-pieces 18 may be folded under the ends

of the flap and when the side wall is pulled outwardly, its corner-pieces will be released from the flap and can unfold and lie flat, as shown in Fig. 2. The flap 11 is also folded inwardly against the side wall 4 and the flap 21 is folded back over the flap 11 and the hinge-piece a^2 is laid against the side wall 4. Stitches 26 extend through the hinge-piece a^2, the wall 4 and the flaps 21 and 11 and secure these parts together, as shown in Figs. 3, 4, 5, and 6, and stitches 27 secure the hinge-piece, near the crease 20, to the lower part of the side wall 4 of the bottom section. The corner-pieces 18^b of the top section each have one fold secured to the side wall 3^a by suitable means, such as stitches 28, and the flap 10^a of the bottom section is folded inwardly over the side wall 4^a and secured thereto by stitches 29. The manner in which the corner-pieces fold under the several side flaps is shown in Fig. 7, wherein the corner-piece 18^a is shown partly unfolded. By raising the free end of the flap 10, the corner-piece can be released from the flap or folded beneath it against the side wall.

In Fig. 2 of the drawing, the box is shown collapsed with the bottom section resting upon the top section. When the box is to be folded, it is laid in the form shown in Fig. 2, on a counter or suitable support, and the bottom section is set up, as shown in Fig. 4, by rocking the end walls 8 and 9 outwardly and raising the side walls 3 and 4, the end portions of the side flaps 10 and 11 being raised simultaneously to permit the corner-pieces to fold thereunder. When the box is filled, it is lifted and the top section is swung outwardly upon the counter and its side wall 4^a and end walls 8^a and 9^a are raised, as shown in Fig. 5, the corner-pieces between the end walls and the side wall 4^a being tucked under the free ends of the flap 10^a. The top section is then swung over the bottom section, the blank bending along the crease 20 between the hinge section a^2 and the side wall 3^a, and also bending along the crease 1^a. In this operation, the corner-pieces 18^b fold automatically against the side wall 3^a of the top section. When the box is closed, the side and end walls of the top section fit closely around the corresponding walls of the bottom section, as shown in Fig. 6.

The flaps 14 on the bottom section are provided only for strengthening the end walls of the box, as may be desirable where the box is used for shipping goods by express or parcel post; but where this additional strength is not required, these flaps may be omitted.

To knock the box down, it is merely necessary to swing the cover outwardly, as shown in Fig. 5, and press the side walls of the parts outwardly, thus releasing the corner-pieces from the flaps, and the end walls will then fold inwardly.

What I claim is:

A folding box formed from a single blank, comprising top and bottom sections and a hinge-piece, having a flap, connecting said sections, both sections having side and end walls and corner pieces creased diagonally to fold inwardly against the side walls, the bottom section having inwardly turned flaps on its side walls and one side wall of the top section having an inwardly turned flap, the ends of said flaps folding over the corner pieces, said hinge-piece extending from the opposite side wall of the top section and fastened, near its juncture with the latter wall, to the lower part of a side wall of the bottom section, and the flap on said hinge-piece being folded into the bottom section over said last mentioned wall, the various flaps being fastened at their central portions to the adjacent side walls and the ends of the flaps being free.

In testimony whereof I hereunto affix my signature.

ELMER H. LUPTON.