

No. 659,943.

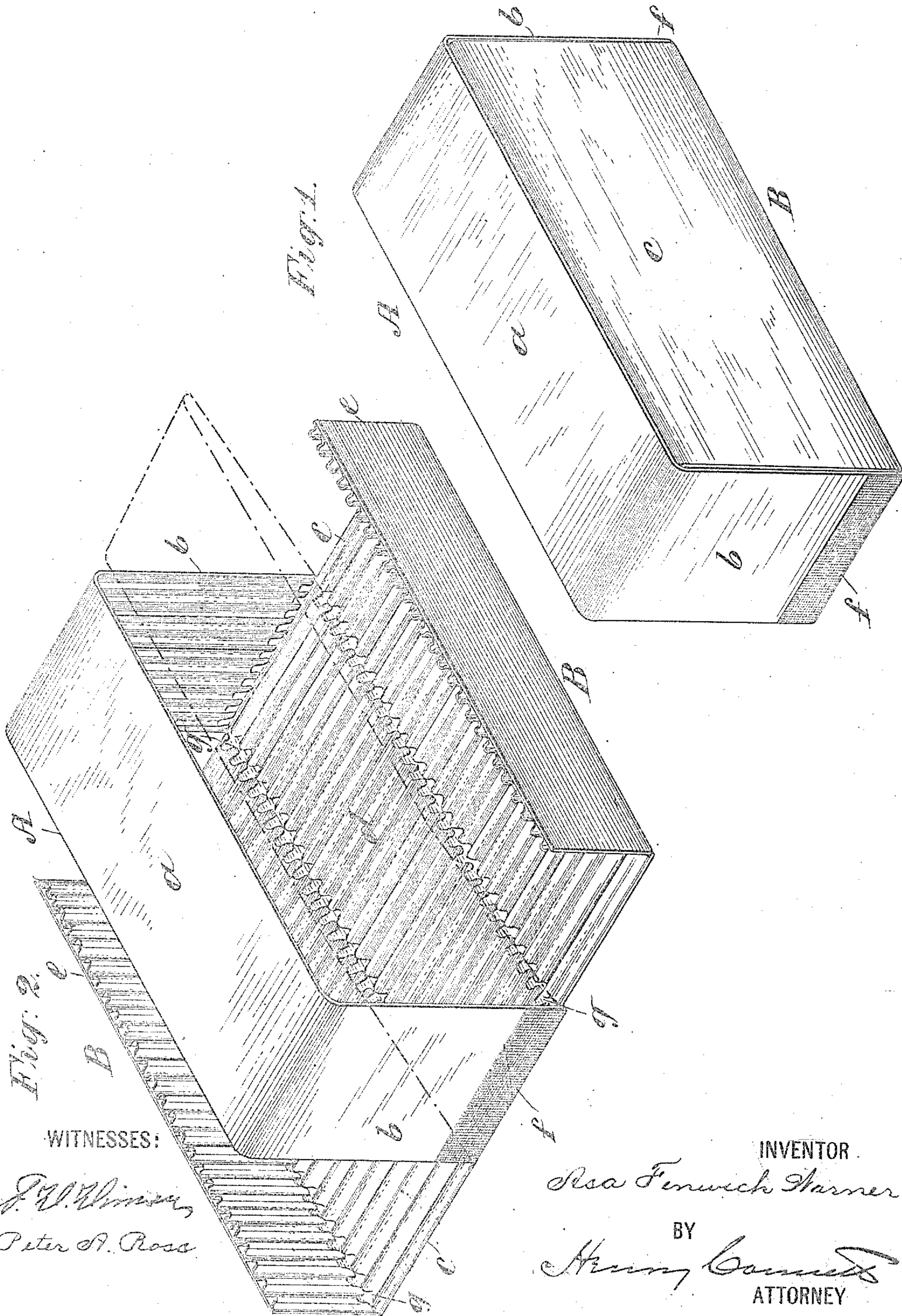
Patented Oct. 16, 1900.

A. F. WARNER.
KNOCKDOWN PAPER BOX.

(Application filed May 26, 1900.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

J. W. Winters
Peter A. Ross

INVENTOR

Alsa Fenwick Warner

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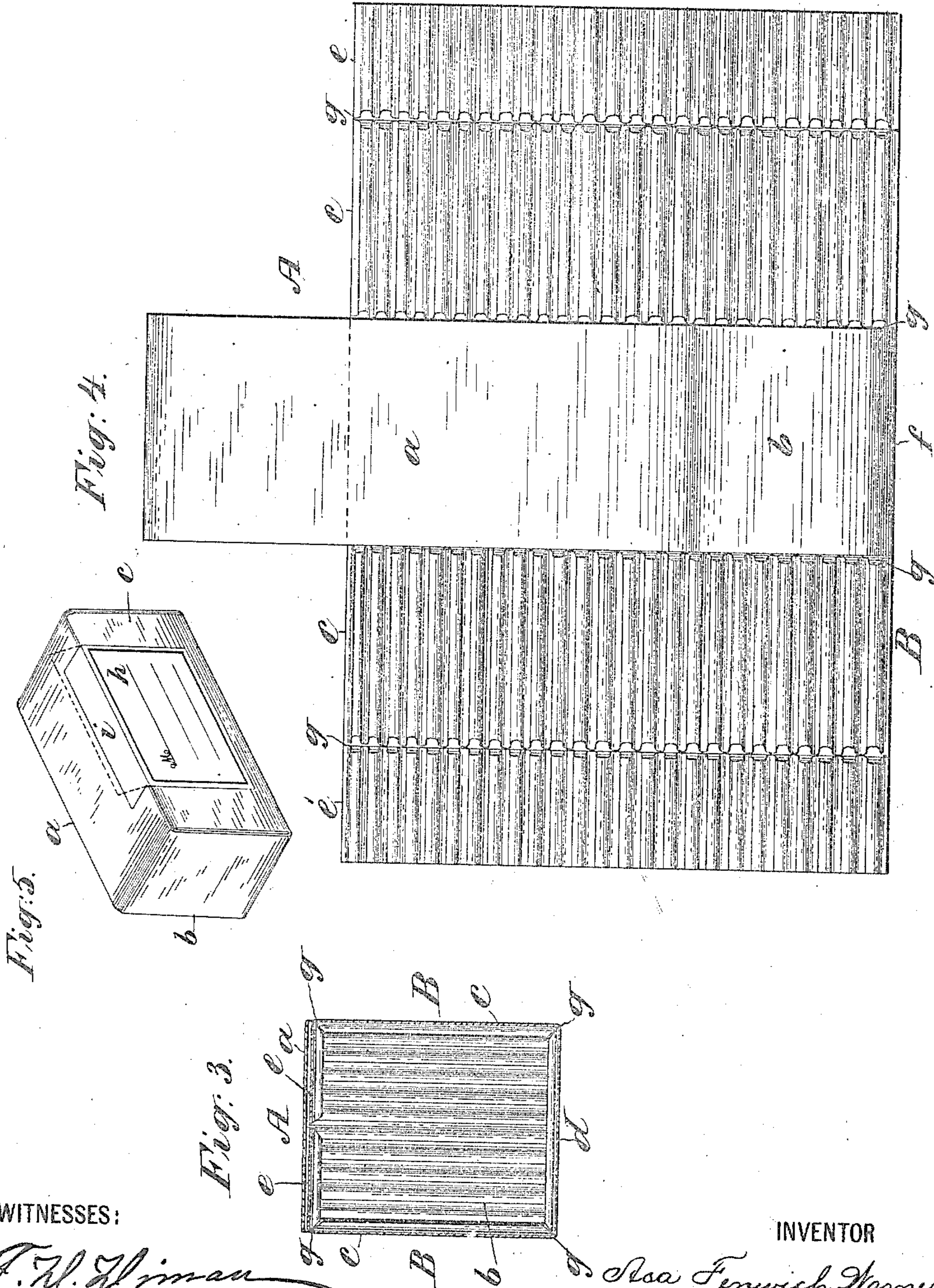
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UNITED STATES PATENT OFFICE.

ASA FENWICK WARNER, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE THOMPSON & NORRIS COMPANY, OF NEW JERSEY.

KNOCKDOWN PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 659,943, dated October 16, 1900.

Application filed May 26, 1900. Serial No. 18,025. (No model.)

To all whom it may concern:

Be it known that I, ASA FENWICK WARNER, a citizen of the United States, residing in Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Knockdown Paper Boxes, of which the following is a specification.

This invention relates to the class of boxes made from paper or paper-board and adapted to be flattened down for packing and shipment; and the object of the present invention is to make such a box in a special manner from a corrugated paper fabric, as will be hereinafter more fully described.

In the accompanying drawings, which illustrate an embodiment of the invention, Figure 1 shows the box folded, as when in use as a receptacle. Fig. 2 shows it open both at bottom and top. Fig. 3 is a cross-section of the folded box seen in Fig. 1, and Fig. 4 shows the box flattened for packing or shipment. Fig. 5 is a perspective view of the box as especially adapted for mailing purposes.

The box when completed is in one piece or substantially integral; but it is composed of two rectangular pieces of corrugated paper fabric, composed of a corrugated sheet pasted to a plain sheet. In the completed box the corrugated sheet is inside.

Considered as a box there is a body and two hinged covers, either of which may be considered the top and the other the bottom. The box is composed of two rectangular sheets or pieces of the corrugated fabric A and B. One of these pieces forms a side and the two ends of the body and the other the other side of the body, the covers, and the tucks on the margins of the covers. The corrugations on these two pieces extend at right angles, respectively, and the creases where the parts are hinged together extend transversely or across the ribs of the corrugations.

Of the piece which forms the main portion of the box-body, *a* is the box side, and *b b* the box ends. Of the piece which forms the covers and part of the body, *c c* are the covers, *d* is the box side between the covers, and *e e* are the flaps or tucks on the free edges of the respective covers. At *f f* the two parts or pieces which form the box are connected by

hinges of cloth or other suitable material. The hinging-creases *g* are of a V shape and are sunk in the ribs of the corrugations, as seen best in Figs. 2 and 4. The flaps or tucks *e e* will be each equal to about half the depth of the body or width of the side *d*, so that when the covers are closed and these flaps tucked in, Fig. 3, they will meet and abut one against the other and prevent the covers from being pressed in too far.

Fig. 4 shows the box pressed flat for packing into a limited space, and the dotted lines in Fig. 2 indicate how the body portion *a b b* may be flattened down. Figs. 1 and 3 clearly show the manner of folding to form the box for use.

Such a box may be constructed very cheaply, is exceedingly stiff and strong when folded, as in Fig. 1, and forms an admirable protecting-covering for fragile articles or such as are likely to be injured by crushing. It will be noted that the side *d* is between the covers *c c* and that the ends *b b* are hinged to the respective ends of the side *d*.

The box being extremely light proportionately to its capacity, it is well adapted for mailing purposes. Fig. 5 shows, on a small scale, one of the boxes provided with an address-blank *h*, pasted on one of its covers *c*. This blank has a gummed flap *i*, which projects normally beyond the limits of the body when the flap *e* on that cover is tucked in. (See dotted lines.) This gummed flap *i* may be moistened and pressed down upon the body, thereby sealing the cover to the body. This is convenient when the box is used for mailing; but of course it may be employed on the boxes when designed for any uses. Indeed, for some uses there may be a gummed blank *h* on each cover. Preferably the tuck-flaps *e e* will be of equal width, so that they may abut at about the middle of the body; but this is not, of course, essential so long as they together equal about the depth of the body and abut properly when the box is folded.

The box may have any proportions desired. Herein the shorter parts *b b* of the body have been called "ends," and the longer parts *a* and *d* have been called "sides;" but obviously these parts may be of equal length, or

the parts *b b* may be longer than the parts *a* and *d*. This is merely a matter of the proportions of the box.

Having thus described my invention,
5 claim—

1. A knockdown box composed of two pieces of corrugated paper fabric, one of said pieces forming a side and the two ends of the box-body, and the other piece forming one side
10 of the body, the two covers, and the tucks thereon, said tucks, taken together, being of substantially the same width as the side, the corrugations of one of said pieces being at right angles to those of the other piece, and
15 the folding-creases being formed transversely of and in the ribs of the corrugated fabric.

2. A knockdown box composed of two pieces of corrugated paper fabric, one piece, A, comprising the side *a*, and ends *b, b*, of the box-body, and the other piece, B, comprising the
20 other side, *d*, of the box-body, the covers *c, c*, and the flaps or tucks *e, e*, on the respective covers, the ends *b, b*, being hinged flexibly to the respective ends of the side *d*, the corrugations on respective pieces A and B being
25 at right angles, and the hinging or folding creases of both pieces extending transversely of the corrugations and formed therein.

3. A knockdown box of corrugated paper fabric, comprising the side *a* and ends *b, b*,
30 in one piece, the covers *c, c*, the side *d* between said covers, and the flaps or tucks, *e, e*, on the free edges of the respective covers and having a width, taken together, equal to the width of the side *d*, said ends *b* being
35 hinged to the respective ends of the side *d*, substantially as set forth.

4. A knockdown box of corrugated paper fabric, composed of two pieces, one of said pieces forming a side and the two ends of the
40 box-body, and the other piece forming one side of the body, the two covers, and the abutting tucks on said covers, the corrugations of one of said pieces being at right angles to those of the other piece, and one of said covers being
45 provided with an address-blank having a sealing-flap which extends beyond the margin of the cover, substantially as and for the purpose set forth.

In witness whereof I have hereunto signed
50 my name, this 23d day of May, 1900, in the presence of two subscribing witnesses.

ASA FENWICK WARNER.

Witnesses:

ASA P. FRENCH,
W. W. JENNESS.