

(No Model.)

2 Sheets—Sheet 1.

H. NORMAN.
COLLAPSIBLE BOX.

No. 581,300.

Patented Apr. 27, 1897.

Fig. 1.

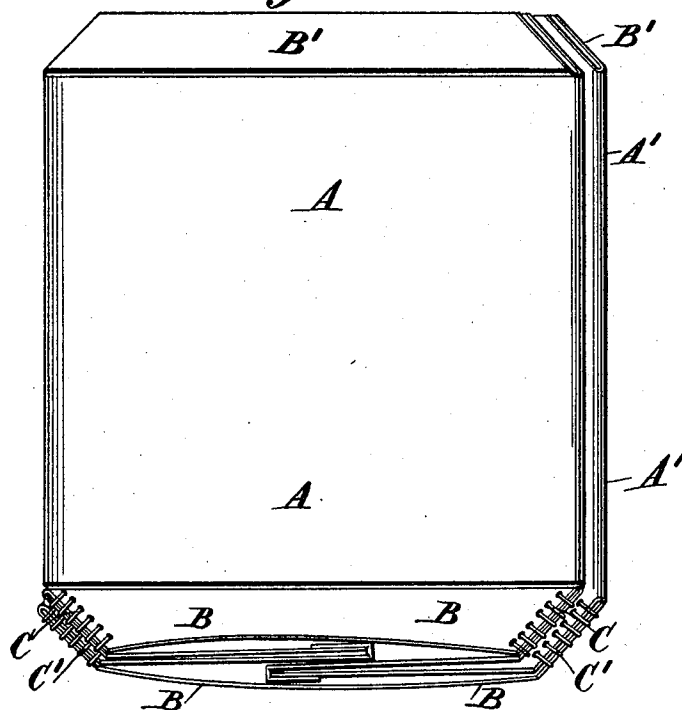
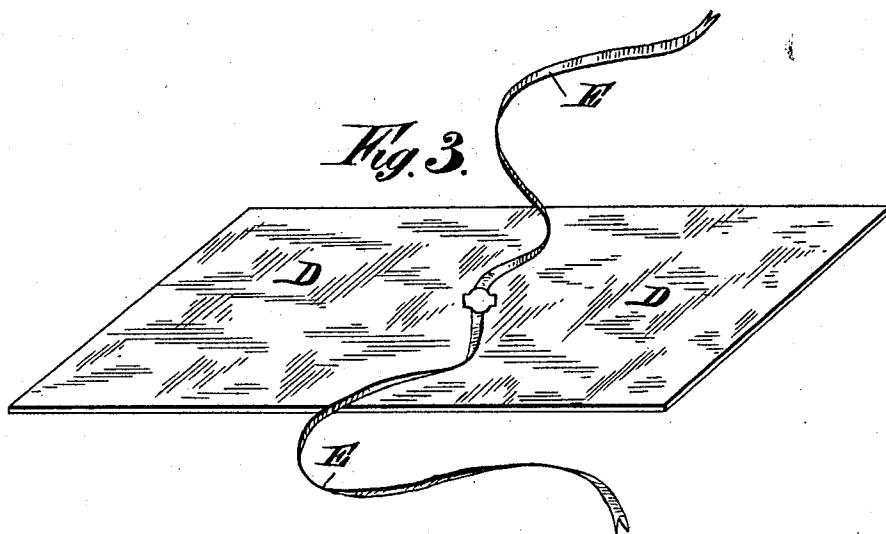


Fig. 3.



Witnesses.

Charles A. Grosschule
Alfred G. Melhuish

Inventor.

Harry Norman
by Henry Gardner,
att'y.

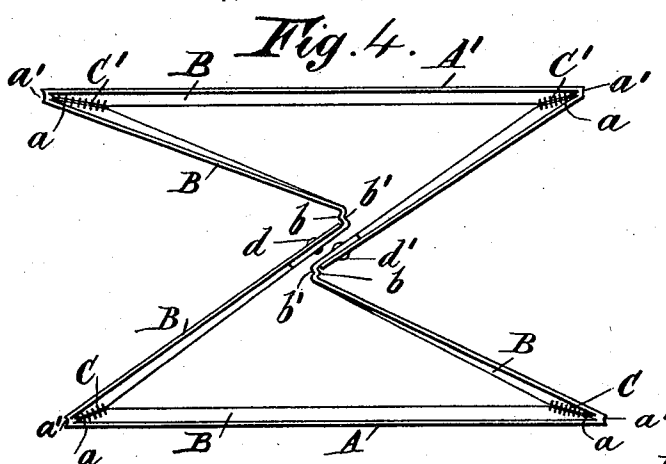
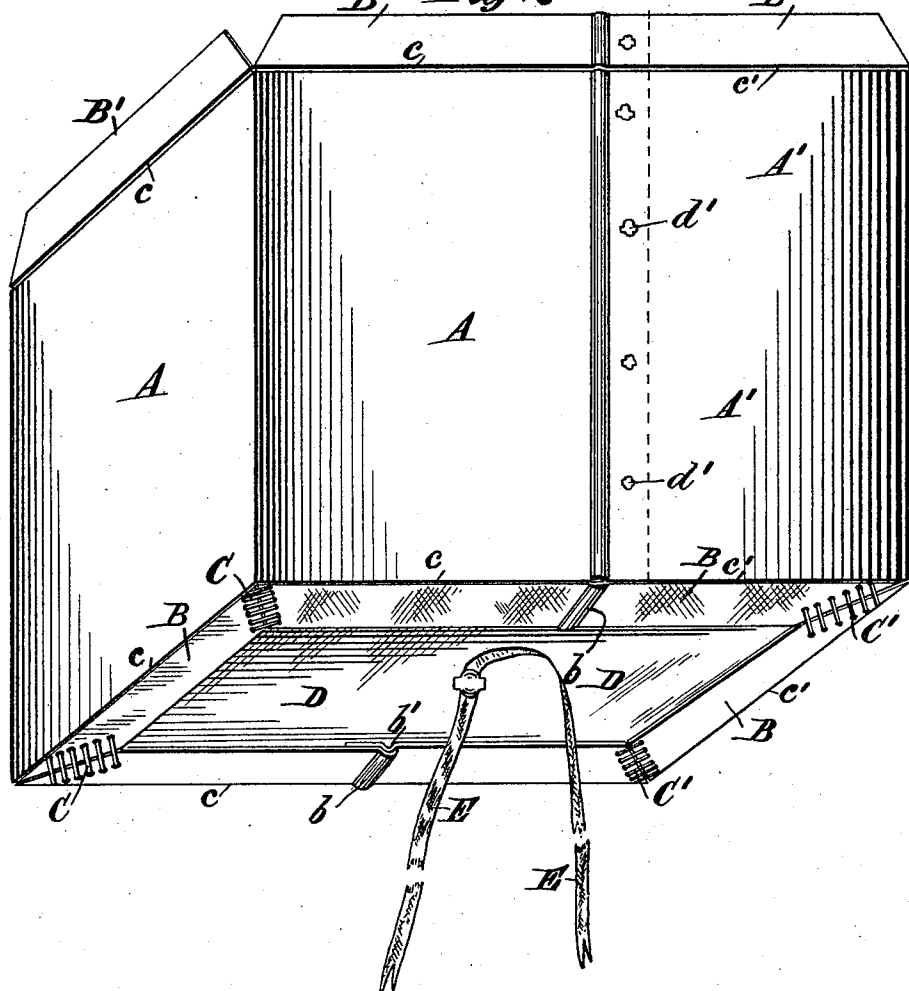
(No Model.)

2 Sheets—Sheet 2.

H. NORMAN.
COLLAPSIBLE BOX.

No. 581,300.

Fig. 2 Patented Apr. 27, 1897.



Witnesses
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UNITED STATES PATENT OFFICE.

HARRY NORMAN, OF LONDON, ENGLAND.

COLLAPSIBLE BOX.

SPECIFICATION forming part of Letters Patent No. 581,300, dated April 27, 1897.

Application filed August 22, 1896. Serial No. 603,618. (No model.) Patented in England March 7, 1896, No. 5,200.

To all whom it may concern:

Be it known that I, HARRY NORMAN, a subject of the Queen of Great Britain, residing at Well Street, Falcon Square, London, England, have invented certain new and useful Improvements in Collapsible Boxes, (patented in Great Britain, No. 5,200, dated March 7, 1896,) of which the following is a specification.

This invention relates to certain improvements in collapsible boxes.

For the purpose of my invention I employ, say, two squares or sheets of material, and by suitable bead-rolling I form hollows and ribs on opposite faces for folding and for strength.

The ends of the two sheets are overlapped and connected by fasteners or rivets, preferably along the vertical central line of the box being made. The top and bottom corners of each sheet are cut away, and the extensions left thereby are folded inwardly, the edges almost meeting. These I lace or connect loosely in any desired manner, so that there is a certain amount of play in the joints when the sides are folded in from the central vertical line, the extensions then assuming a vertical position when the collapsing takes place. On expanding the box the extensions reassume their inwardly-horizontal positions. This lacing or loose connection of the cut-away corners may be at one end only, if desired.

I employ separate end sheets as bottoms and covers or a separate bottom sheet only, and employ a fillet-edged cover or lid.

I purpose providing the bottom sheet with tying-tapes for securing the box with its contents and also for securing the box when collapsed, in which condition it occupies a space equal to about one-eighth its expanded bulk in one direction.

My invention is shown on the annexed drawings.

Figure 1 is an elevation of the four sides constituting the body of the collapsible box in a closed-up condition; Fig. 2, a perspective elevation of the box-body in an extended condition, the removable bottom being within the body; Fig. 3, a detached view of the bottom;

Fig. 4, a plan of box-body in a nearly-collapsed condition and with the flaps nearly vertical.

A A' are two squares or sheets of stout paper with ribs and hollows on opposite faces, at *a a'* for corner-foldings, at *b b'* for mid-side foldings, and at *c c'* for top and bottom edge folding, the two sheets being connected by an overlap and by rivet-studs *d d'*.

B B' are top and bottom flaps formed from the box-body, the corners being cut away at an angle of forty-five degrees to enable the end edges of said flaps to meet when the flaps are folded inwardly. The corner edges of the bottom flaps are loosely connected by lacing-wires or by threads C C', which allow a yielding property to exist between the flaps and the wires to such an extent that when the box-body is extended the flaps fall inwardly and serve as a support for the loose bottom D when inserted from the top open end, but which flaps open outwardly when the bottom D is removed and the two sides, as at Fig. 1, are pushed in, said flaps then gradually and nearly assuming a vertical position so as to correspond with the sides, two only of which fold inwardly, with the central parts of the two folding sides overlapping, as indicated at the lower central part in Fig. 1.

The upper flaps do not require lacing wires or threads, but they assume approximately flat and vertical positions when the box is being expanded or when closed.

Any ordinary lid or cover can be used with my collapsible box, but if such lid has depending sides the folded body can be lodged inside it, and then the bottom can be put on, the strings E E, with which the bottom is provided, being employed for wrapping and tying the parts into small compass.

What I claim, and desire to secure by Letters Patent, is—

1. In a collapsible box the body A A' provided with beaded foldings at *a, a'*, also central beaded foldings at *b, b'*, near overlapping parts riveted together, bottom flap corners being loosely wire or thread laced for yielding or assuming horizontal and vertical positions respectively during the expanding or closing-up operations, as set forth.

2. A collapsible box-body having bottom flaps provided with corner wire or thread lacing which permit of said flaps assuming a horizontal or a vertical position to the sides
5 in the process of expanding and of collapsing the body as described.
In testimony whereof I have hereunto set

my hand in presence of two subscribing witnesses.

HARRY NORMAN.

Witnesses:

PERCY E. MATTOCKS,
WILLIAM ARNOLD BROWN.