L. S. LUNDY.

COLLAPSIBLE BOX.

APPLICATION FILED OCT. 16, 1919.

1,348,725.

Patented Aug. 3, 1920.

2 SHEETS—SHEET 1.

Fig. 1.

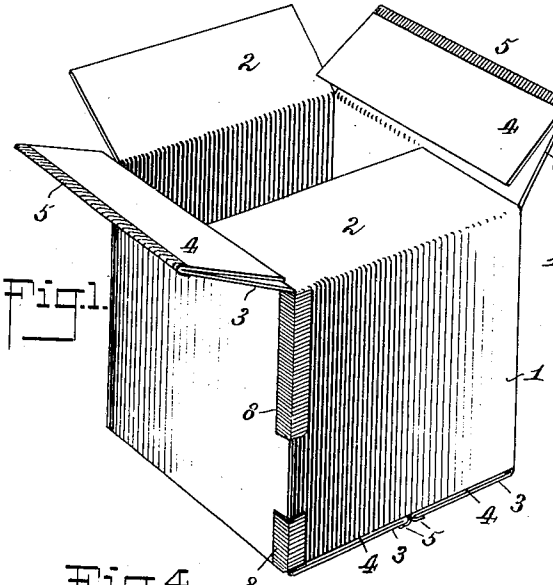


Fig. 2.

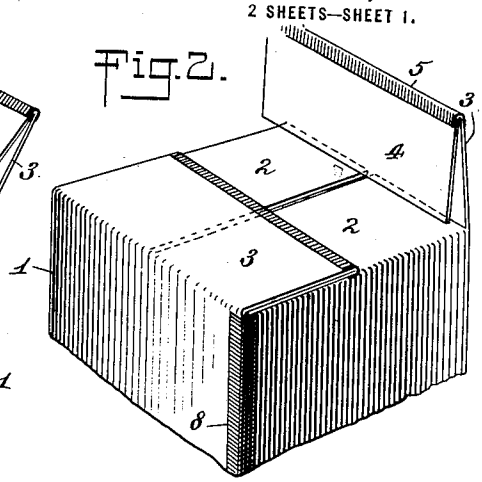


Fig. 3.

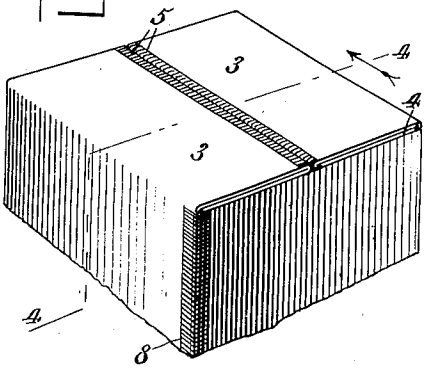


Fig. 4.

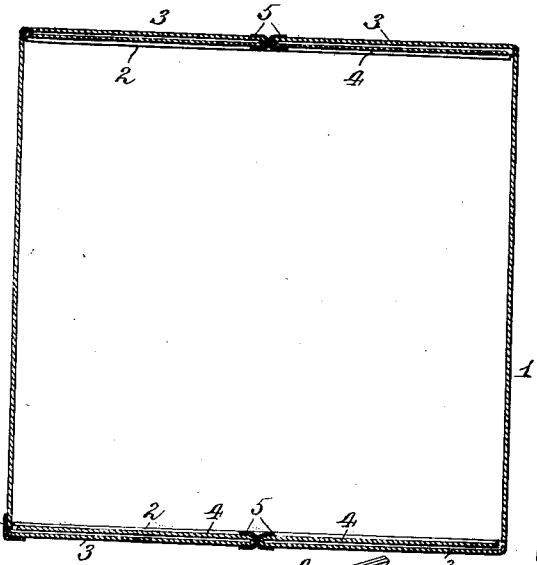


Fig. 5.

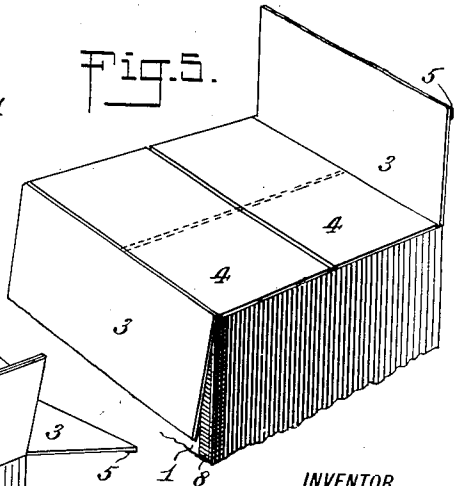
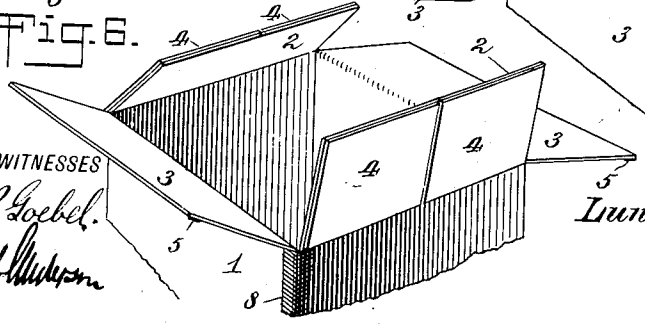


Fig. 6.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 7.

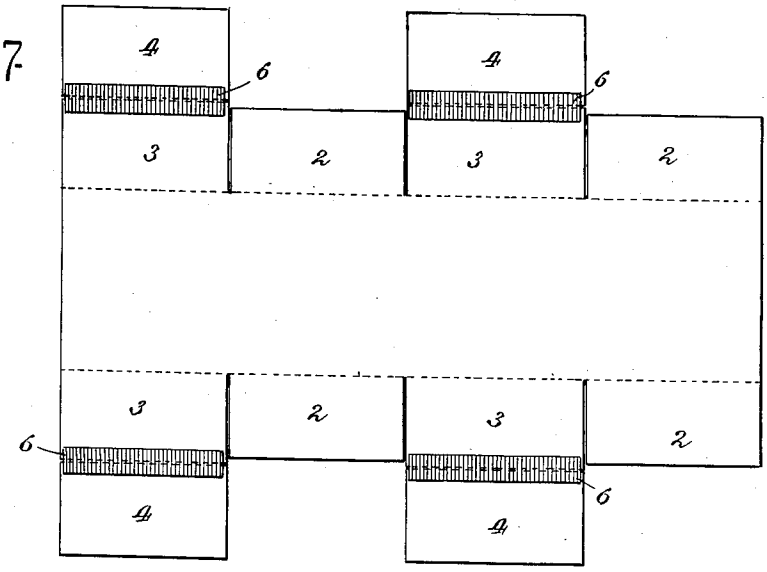
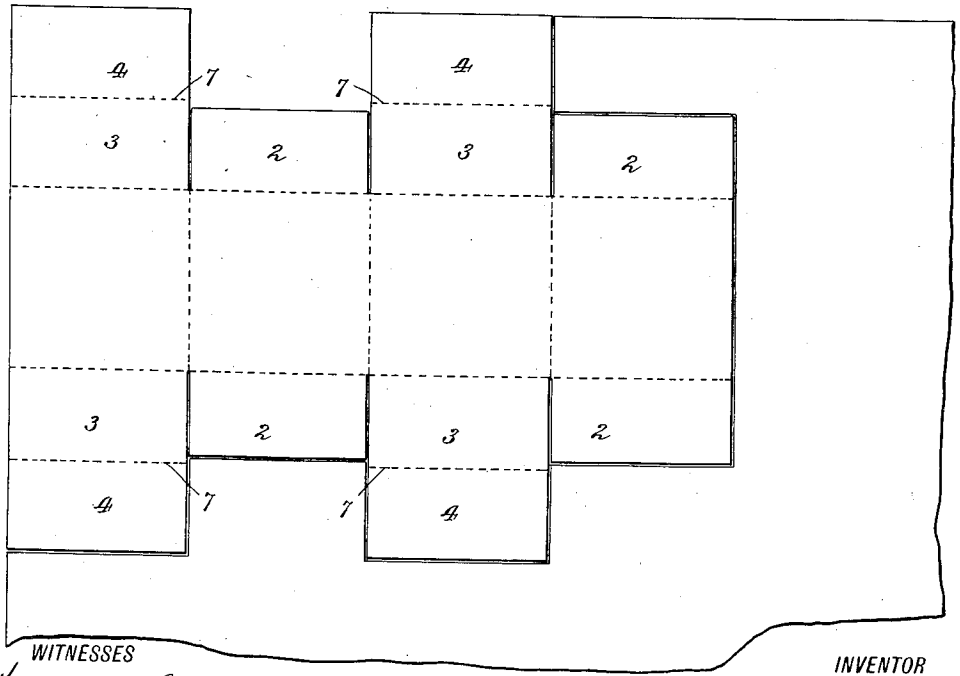


Fig. 8.



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UNITED STATES PATENT OFFICE.

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COLLAPSIBLE BOX.

1,348,725. Specification of Letters Patent. Patented Aug. 3, 1920.

Application filed October 16, 1919. Serial No. 331,083.

To all whom it may concern:

Be it known that I, LUNDY SHANNON LUNDY, a subject of the King of England, residing at Niagara Falls South, in the Province of Ontario, Dominion of Canada, have invented a new and Improved Collapsible Box, of which the following is a full, clear, and exact description.

My invention relates more particularly to collapsible boxes made of card board, corrugated paper board, or other suitable material.

The object of the present invention is to produce a collapsible box so constructed that it may be opened to remove its contents without destroying its usefulness as a sealed container, and whereby it may be used a plurality of times, constituting as effective a shipping container upon its usage for a second or third time as upon its initial use and thus effecting a considerable saving to the users of such containers.

With the foregoing object in view, my invention consists of the improved shipping container hereinafter described and claimed and as shown in the accompanying drawings.

In the drawings Figure 1 shows a perspective view of my improved box set up for use with the lower end sealed and the upper end open.

Fig. 2 shows a perspective view of the upper portion of the box with the upper end partially sealed.

Fig. 3 shows a perspective view of the upper portion of the box with the upper end entirely sealed.

Fig. 4 shows a vertical sectional view taken in a line extending transversely through the outer sealing flaps and between the meeting edges of the inner sealing flaps.

Fig. 5 shows a perspective view of the upper portion of the box with one end partially open in the initial or first opening of such end.

Fig. 6 shows a perspective view of the upper portion of the box as it will appear when the ends have been entirely opened after a first or initial opening.

Fig. 7 shows a plan view of the blank from which one form of my collapsible box is made.

Fig. 8 shows a plan view illustrating the method of cutting another form of blank from which my collapsible box is made

Similar reference characters will be employed throughout the specification and on the drawings to indicate corresponding parts.

The illustrated embodiment of my invention consists of a substantially rectangular or cubical body portion (1) having four sides of substantially equal dimensions and arranged in pairs, each pair extending in parallel vertical planes. At the upper and lower ends, the body portion (1) is provided with integrally formed inner sealing flaps (2) there being two such flaps at each end carried by two of the opposite parallel sides of the body portion, and they are of a length corresponding substantially with the length of the sides of the body portion, and are of a width substantially one-half of that of the openings at the top and bottom of the body portion so that when turned inwardly as shown in Figs. 2 and 3, the free edges of the inner sealing flaps (2) will approximately meet upon a line extending across the opening centrally disposed and parallel to the upper edges of the body portion to which said inner sealing flaps are connected.

The two opposite walls of the body portion (1) are provided at the top and bottom with compound or duplex sealing flaps (3 and 4) connected to each other by a foldable joint (5). These sealing flaps (3 and 4) may be integrally formed with the blank from which the box is made, as shown in Fig. 8, or as shown in Figs. 1 to 7, the flaps (4) may be formed separately and secured to the flaps (3) by strips of adhesive binding tape (6).

It will, of course, be observed that in Fig. 8, wherein the flaps 3 and 4 are formed integrally with the blank, the foldable joint (5) is produced by bending or scoring lines as indicated at 7, and that the portions removed between the flaps (4) in cutting the blank shown in Fig. 8, may be utilized in manufacturing the blank shown in Fig. 7, and thus considerable waste of material is avoided.

It will, of course, be understood that the construction is or may be the same at both ends, that is to say, the top and bottom of the box as the same is illustrated in the drawings.

Each of the flaps (3 and 4) is substantially of a size and shape to cover one-half

of the opening at the top or bottom and when they are folded inwardly, as shown in Figs. 2 and 3 they effectually cover the inner flaps (2).

In the use of the box or container for an initial shipment the ends are closed by first turning inwardly the inner sealing flaps (2) after which the flaps (4) are turned inward so as to lie beneath the flaps (3) but wholly disconnected therefrom except at the foldable joint (5).

The exposed face of the flaps (4) and the upper exposed face of the inner flaps (2) are provided with a suitable adhesive so that when turned down, as shown in Fig. 3, the flaps (4) and flaps (2) will be effectually sealed. This leaves the flaps (3) entirely free excepting as they are connected along one edge to the body portion (1) and along their inner and meeting edges with the flaps (4) which are adhesively connected to the flaps (2). As thus closed and sealed the box forms an effective protector for its contents and when it arrives at its destination it may be opened by severing the flap (3) from the flap (4) by cutting along the foldable joint (5) as shown in Fig. 5.

This leaves the flap (4) adhesively connected to the flaps (2) and by cutting through the flaps (4) along a line corresponding to the line formed by the meeting edges of the flaps (2), the flaps (2) may be turned upward, as shown in Fig. 6, thus affording access to the box. This, of course, leaves portions of the flaps (4) adhesively attached to the flaps (2).

As shown in Fig. 6 the container may be again sealed by turning inward the flaps (2) with the portions of flaps (4) adhesively connected to their upper surface, after which the flaps (3) may be turned inwardly and adhesively secured to the portions of the flaps (4) which are adhesively connected to and form a part, as it were of the flaps (2).

Of course, this contemplates a second use for shipping purposes by the one who receives the original case. If such use be made by the original receiver the one to whom he ships may open the other end of the case in the same manner as the first end was opened and the container will remain effective for a third use. On the other hand the first receiver may have instructions to open both ends so that the case may be collapsed and returned to the original shipper for a second use which can, of course, be done in the manner herein set forth for the initial opening of the container.

The meeting ends of the blank forming the body portion may be secured in any suitable manner as by a strip of textile or other suitable binder (8).

From the foregoing description it will be observed that my invention may be said to consist primarily of a collapsible box or container provided with inner sealing flaps and outer duplex sealing flaps, the latter foldably connected to each other so that they are effective for successive sealing operations.

Having described my invention, I claim:

A collapsible box provided with inwardly folding sealing flaps upon opposite parallel walls and inwardly folding duplex sealing flaps upon the other opposite parallel walls, such duplex sealing flaps being provided with an intermediate foldable joint extending substantially along a central line parallel with the line of union with the wall and said foldable joints meeting along the center and said flaps covering the entire surface at one end of the box when sealed.

LUNDY SHANNON LUNDY.