

L. J. IVES.

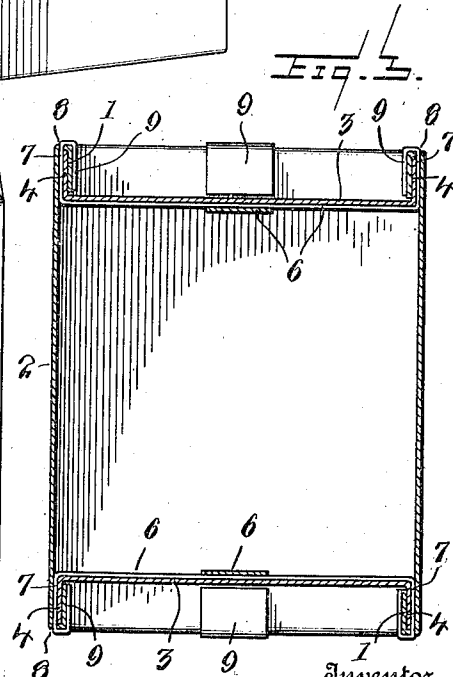
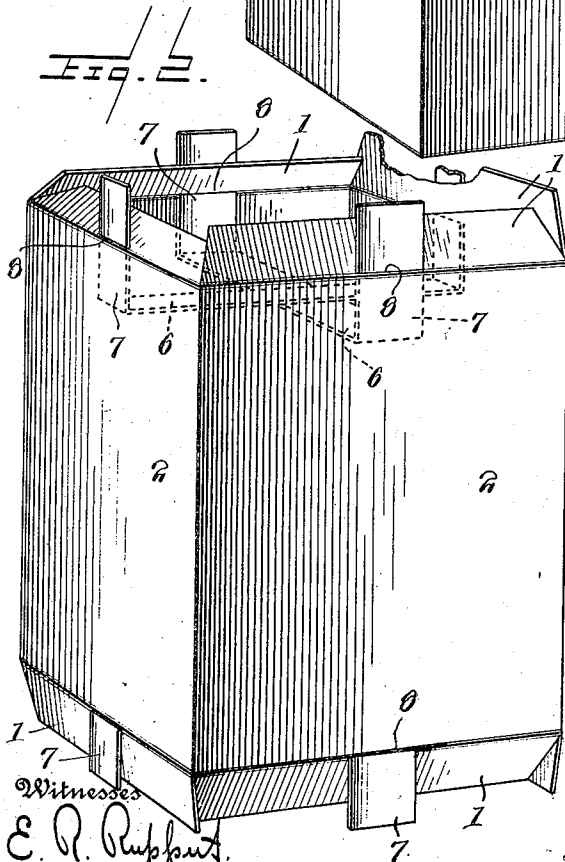
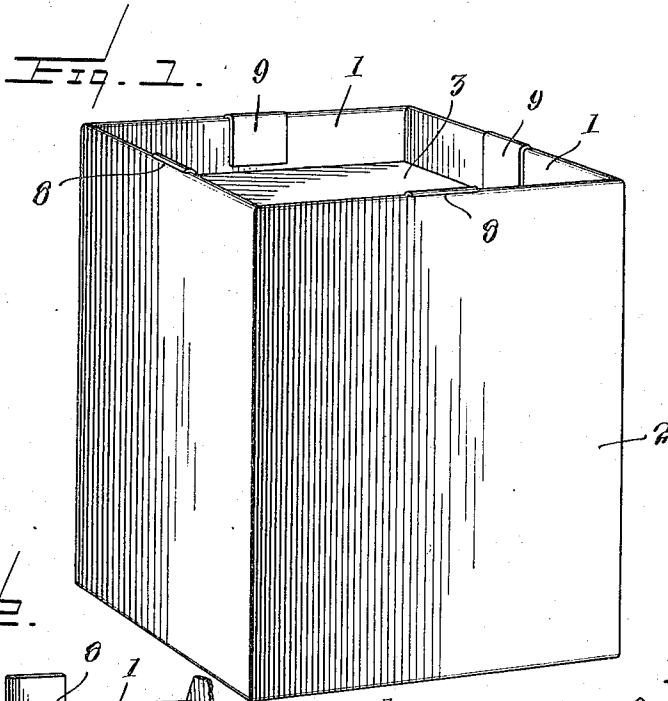
BOX.

APPLICATION FILED JAN. 13, 1912.

1,054,655.

Patented Feb. 25, 1913.

2 SHEETS—SHEET 1.



Witnesses
E. R. Ruppert.
U. B. Hilliard.

Lewis J. Ives

By Victor J. Evans

Attorney

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2 SHEETS—SHEET 2.

Fig. 4.

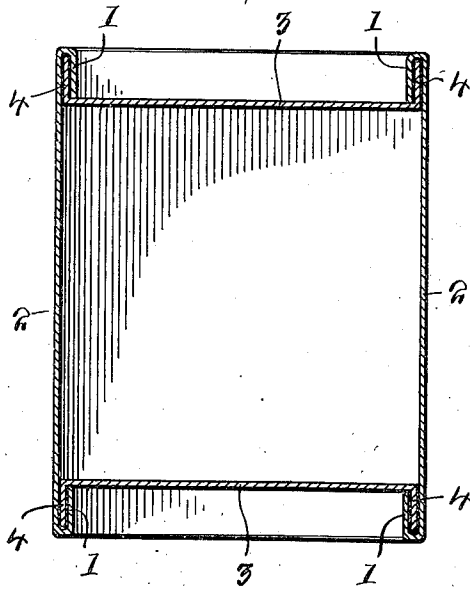


Fig. 5.

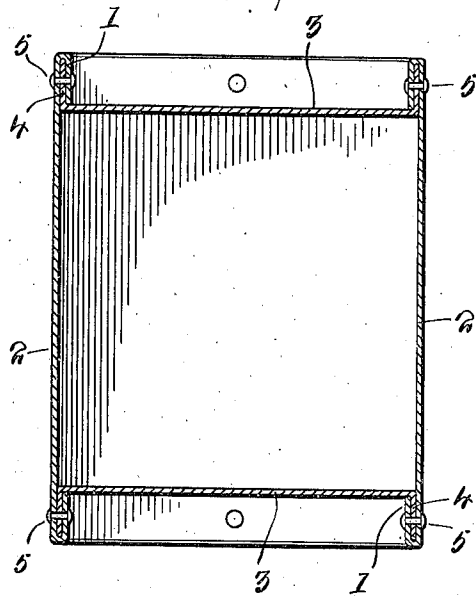
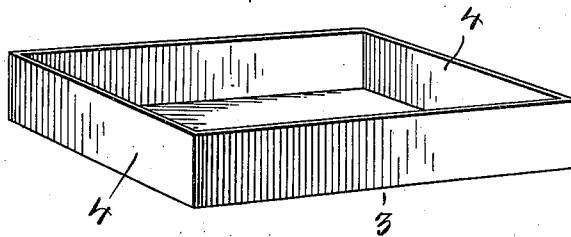


Fig. 6.



Witnesses

E. R. Ruppert.
V. B. Hillyard.

Inventor

Lewis J. Ives

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

LEWIS J. IVES, OF BUFFALO, NEW YORK, ASSIGNOR TO HARRY F. IVES, OF NEW YORK, N. Y.

BOX.

1,054,655.

Specification of Letters Patent.

Patented Feb. 25, 1913.

Application filed January 13, 1912. Serial No. 670,992.

To all whom it may concern:

Be it known that I, LEWIS J. IVES, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Boxes, of which the following is a specification.

The present invention relates to boxes which are constructed solely of sheet material, the novelty residing in the means whereby the ends of the box are secured when in position both against external and internal pressure.

In its special adaptation the invention relates to a packing box constructed of stout paper or cardboard and comprising a body and ends, the body of the box having foldable flaps at its ends which are adapted to extend over and embrace flanges at the edges of the ends, the several parts being secured in any manner either by means of glue, rivets or like means commonly employed for fastening paper or cardboard.

The invention consists of the novel features, details of construction and combination of parts, which hereinafter will be more particularly set forth, illustrated in the accompanying drawings, and pointed out in the appended claim.

Referring to the drawings, forming a part of the specification, Figure 1 is a perspective view of a box embodying the invention. Fig. 2 is a perspective view of the box having the end removed and the flaps at the ends of the sides partly folded. Fig. 3 is a central longitudinal section with the end secured in place. Fig. 4 is a section of an end portion of a box, showing a modification, the flaps and flanges forming the joint between the body of the box and the end being secured by means of a glue joint. Fig. 5 is a view similar to Fig. 4 of a further modification, showing the joint between the box body and the end made secure by means of rivets or like fastenings. Fig. 6 is a perspective view of one of the ends of the box.

Corresponding and like parts are referred to in the following description, and indicated in all the views of the drawings, by the same reference characters.

The box including the body and ends is formed of sheet material such as stout paper, card or pasteboard. The body of the

box may be of any size and is preferably formed by folding a strip of the material about a former and securing the edges in any manner. The sides of the box have projecting end portions which form flaps 1, said flaps being foldable inwardly so as to extend over flanges or bent edge portions of the ends of the box. The foldable flaps 1 are separated from one another by cuts which correspond in position with the corners of the box. The foldable flaps 1 are of uniform width and may fold on lines formed by scoring end portions of the sides 2 of the box or by weakening edge portions of the box along lines corresponding with the folds in any manner to insure proper folding of the flaps.

The end pieces 3 are of a size to fit snugly within the open ends of the box body and are provided at their edges with flanges 4 which are adapted to bear against the inner sides of the box near the ends thereof. When the end pieces 3 are in position the flaps 1 of the box sides are folded over the flanges 4. Outward displacement of the ends is prevented by the inner edges of the flaps 1 engaging the end pieces 3 and by the outer edges of the flanges 4 engaging the folds between the sides 2 and flaps 1.

As indicated in Fig. 4 the flanges 4 and flaps 1 may be secured to one another and to the sides 2 of the box by means of glue and as shown in Fig. 5 rivets 5, or like fastenings, are employed, the same passing through the parts 1, 2 and 4. The joints shown in the modifications are such as to prevent any possible inward displacement of the end pieces 3, but are such as to preclude removal of the end pieces without mutilating or destroying the parts.

In the preferred construction the end pieces 3 are prevented from inward displacement by means of strips 6 which are extended across the box between opposite sides, said strips engaging the end pieces 3 to limit their inward movement. The strips 6 preferably consist of metal straps which have their end portions bent at a right angle, as indicated at 7, and passed through cuts 8 formed in the folds between the flaps 1 and box sides 2. The projecting ends of the bent portions 7 are adapted to be inwardly bent, as indicated at 9, so as to confine the flaps 1 and flanges 4, said strips serving to

secure the end pieces against both inward and outward displacement. The strips 6 likewise serve to brace the box body when the end pieces are not in place.

5 The construction is such as to admit of the boxes being shipped in knockdown condition, the end pieces being nested and the bodies folded. It is to be understood that the box bodies with their foldable flaps and
10 cuts 8 are formed complete at the factory so that the user may easily place the strips 6 in position preliminary to inserting the end pieces 3, after which the parts are fastened by folding the flaps 1 over the flanges 4 and
15 subsequently bending the terminal portions 9 of the bent end portions 7 of the strips.

From the foregoing description, taken in connection with the accompanying drawings, the advantages of the construction and
20 of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I
25 now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claim
30 appended hereto.

Having thus described the invention what is claimed as new, is:—

A box constructed of sheet material such as cardboard, the same comprising a box body having foldable flaps at the ends of its
35 sides and having cuts in the folds formed between the said sides and flaps, an end piece fitted snugly within and closing the open end of the box body, and having outer
40 flanges at its edges over which the flaps at the ends of the box sides are folded, means for securing the flaps and flanges to one another and to the sides of the box, and cross-
ing metal strips engaging the inner side of the end pieces and having their end portions
45 bent approximately at a right angle to pass between the sides of the box and the flanges of the end piece and through the cuts formed in the folds of the flaps and having their
50 projecting ends bent inwardly over the said flaps and flanges to confine them, said strips serving to brace the box and to prevent inward displacement of the end piece.

In testimony whereof I affix my signature in presence of two witnesses.

LEWIS J. IVES.

Witnesses:

JOHN H. VALLERY,
C. H. BURK.