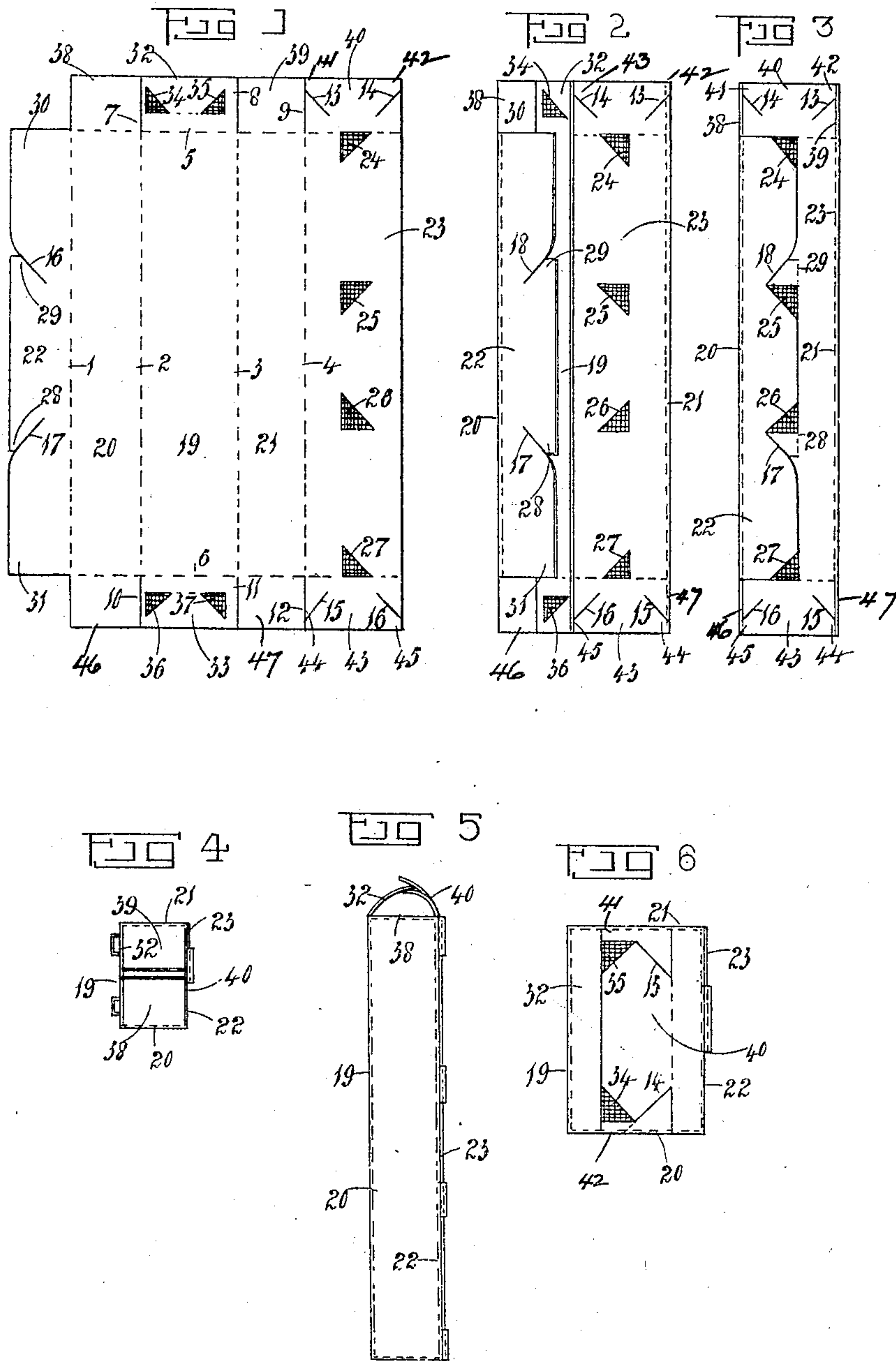


No. 814,264.

PATENTED MAR. 6, 1906.

F. W. BOYNTON.
CARDBOARD BOX.

APPLICATION FILED MAY 2, 1904.



Witnesses.

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FRANCIS W. BOYNTON, OF AUCKLAND, NEW ZEALAND.

CARDBOARD BOX.

No. 814,264.

Specification of Letters Patent.

Patented March 6, 1906.

Application filed May 2, 1904. Serial No. 205,992.

To all whom it may concern:

Be it known that I, FRANCIS WILLIAM BOYNTON, printers' furnisher, a subject of His Majesty the King of Great Britain and Ireland, residing at Fort street, Auckland, in the Provincial District of Auckland, in the Colony of New Zealand, have invented certain new and useful Improvements in Cardboard Boxes, of which the following is a specification.

This invention relates to cardboard boxes, and provides an improved mode of constructing and fastening a box without the aid of glue, staples, or the like, the joints being effected by the shaping and cutting of the cardboard itself.

My box is rectangular in section, and when folded up the card overlaps to form one side, the two parts of the card being connected together by points formed upon one part passing into slots cut in the other. The slots are cut at reversed and opposing angles, so that the juncture of the two parts of the card is made secure. The ends are formed with flaps upon the sides which fold inwardly and a wing upon the back which folds over the side flaps. A cover upon the front has points which pass beneath the wing and also other points which are inserted into slots cut at reversed and opposing angles therein. The card is embossed where the slots are cut through to provide a pocket for the points of the opposing card which pass through said slots.

Referring to the accompanying drawings, Figure 1 is a plan of a sheet of cardboard cut, shaped, scored, and embossed to produce a box according to my invention. Fig. 2 is a plan showing the box partly folded up. Fig. 3 is a similar view showing the box folded up, with the ends of the card connected together. Fig. 4 is an end elevation of the end of the box, showing the first step in closing it. Fig. 5 is a side elevation showing another step in closing the box. Fig. 6 is an end elevation showing the box closed.

A single sheet of cardboard is cut to the shape shown in Fig. 1 and is scored to facilitate the folding upon the dotted lines 1, 2, 3, 4, 5, and 6. The card is cut through upon the full lines 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, and 18. When folded along the scores, the part 19 forms the back of the box, the parts 20 and 21 the sides, and the parts 22 and 23 the top. The part 23 has the diagonal slots 24, 25, 26, and 27, the slots 24 and

25 being at right angles to the slots 26 and 27. The top 22 is shaped to produce the locking-ears 28 and 29, the cuts 17 and 18 being respectively at right angles to the slots 25 and 26.

When the card is folded upon the scores 1 2 3 4 to form a rectangular box, as shown in Figs. 2 and 3, the top part 22 is folded over the part 23. The ear 29 is passed through the slot 25, the ear 28 through the slot 26, and the angle corner 30 through the slot 24, and the angle corner 31 through the slot 27.

To facilitate the entry of the ears and angle corners into the slots, I emboss the card, as indicated by the triangular cross-line patches shown on the top 23, whereby the card is pressed out to form pockets for the reception of the ears and angle corners. This embossing is effected in any common manner known to printers and may be done in one operation simultaneously with the cutting and scoring of the card. The wing 32, integral with the back 19, has slots 34 and 35 at right angles to each other, and the wing 33, also integral with the back 19, has slots 36 and 37 at right angles to each other.

I will now describe the closing of one end of the box, the other end being closed in exactly the same manner.

Referring more particularly to Figs. 4, 5, and 6, the box having been folded and the top parts connected, the flaps 38 and 39 are bent inwardly at right angles, the wing 32 is then folded over them, and its outer edge inserted in the cuts 13 and 14 of the cover-piece 40, the cuts 13 and 14 being of just sufficient depth to receive the cover-piece when fully folded down at right angles to the back 19. The points 41 and 42 (the cuts producing which are at an angle of forty-five degrees) are then inserted in the slots 34 and 35 and the cover-piece 40 pushed down, with the result that the points fully enter the slots. The ends of the slots 34 and 35 nearest the back 19 coincide with the top edge of the cover-piece 40 when it is pushed down. The points 41 and 42 act as wedges, each having an angle of forty-five degrees, and force the edge of the cover-piece 40 against the bottoms of the slots 34 and 35, with the result that the end of the box is securely locked. It is not imperative that the points 41 and 42 and the slots 34 and 35 have an angle of forty-five degrees; but this is the angle which I consider has the best effect. The wing 32 is embossed, as shown in the triangular cross-line patches, to

receive the points 41 and 42, the embossing being effected as previously described.

The cover-piece 43 upon the part 23 is similar to cover-piece 40 and has similar cuts 15 and 16.

Flaps 46 and 47, upon the ends of the sides 20 and 21, respectively, correspond with the flaps 38 and 39 upon the opposite ends of the same sides.

10 Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

15 A cardboard box comprising in combination a back, sides attached to the back, end flaps attached to the sides, a top having diag-

onal slots some of which are angled reversely to the others and having embossed pockets, cover-pieces attached to the top having reversed diagonal slots extending inwardly 20 from the edges, wings attached to the back and having diagonal slots, embossed pockets in the wings to which the diagonal slots form openings, the cover-pieces entering the pockets of the wings and the points of the wings 25 passing beneath the cover-pieces when the ends are closed, substantially as set forth.

FRAS. W. BOYNTON.

Witnesses:

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