J. W. McINDOE.

KNOCKDOWN PAPER BOX.

APPLICATION FILED SEPT. 30, 1904.

**919,292.** Patented Apr. 20, 1909.

*Fig. 2.*

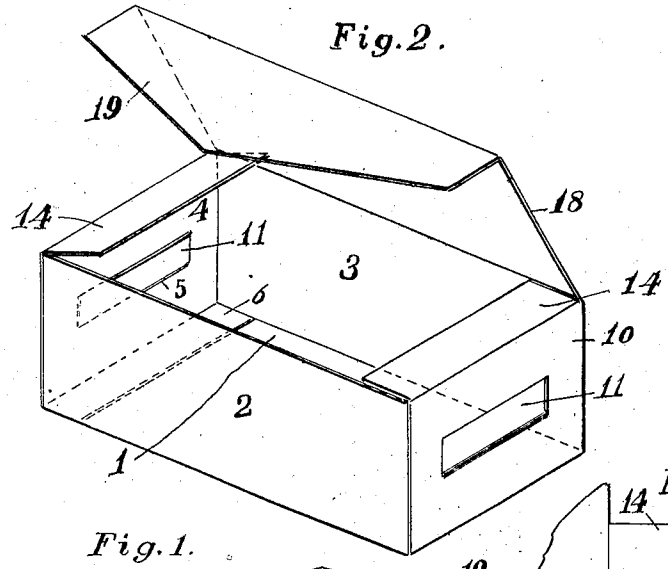



*Fig. 1.*

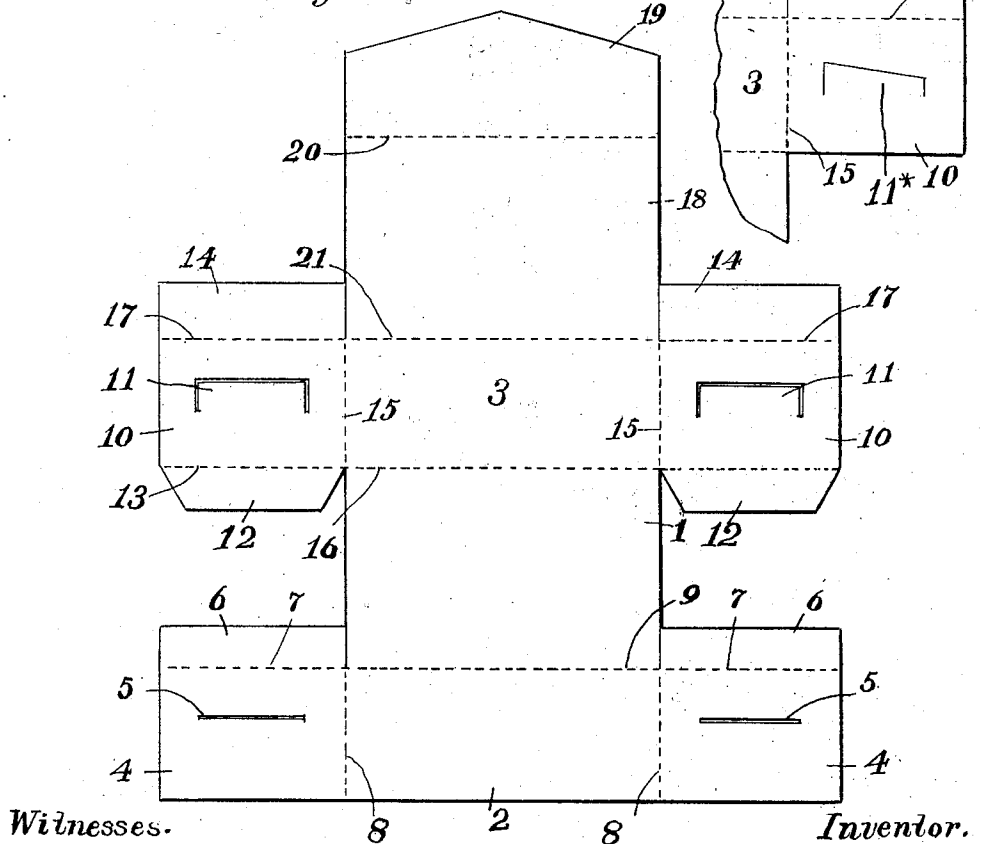



*Fig. 3.*




Witnesses.
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# UNITED STATES PATENT OFFICE.

JAMES W. McINDOE, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO ARTHUR E. WHITNEY, OF WINCHESTER, MASSACHUSETTS.

## KNOCKDOWN PAPER BOX.

No. 919,292. Specification of Letters Patent. Patented April 20, 1909.

Application filed September 30, 1904. Serial No. 226,652.

*To all whom it may concern:*

Be it known that I, JAMES W. McINDOE, of 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, taken in connection with the accompanying drawings, is a specification.

My invention relates to knock-down paper boxes and has for its object the production of a box of this character the end walls of which consist of two end portions locked together in a manner that will give great rigidity to the box and at the same time present an ornamental appearance by forming a depressed panel in the outer face of each end.

It consists in certain novel features of construction, arrangement, and combination of parts which will be readily understood by reference to the description of the accompanying drawing forming a part of this application, and to the claims hereto appended, and in which the invention is clearly pointed out.

Figure 1 of the drawings represents a plan of the blank, cut from cardboard or other suitable material, from which a complete covered box may be formed. Fig. 2 represents a perspective view of a box embodying this invention, with the cover raised or partially opened, and Fig. 3 represents a slight modification of the form of the blank in which the locking tongue is formed by cutting two parallel slits in the end piece and connecting two of the ends of said slits by means of a diagonal slit.

In the drawings, 1 indicates the bottom of the box, 2 the front side of the box, 3 the rear side, 4—4 the inner end portions connected to the front side portion 2, each of which has cut through it parallel to the bottom edge thereof a straight opening 5 extending longitudinally in each direction an equal distance from the center of said end portion 4, the ends of said slot being the same distance from the front and rear ends of said end portion. Each end portion 4 is also provided with a flap 6 which is bent on the dotted line 7 into a position at a right angle to said end piece 4, which in turn is bent on the dotted line 8 into a position at a right angle to the front 2. The front 2 is bent on the dotted line 9 into a position at a right angle to the bottom 1 with the flap 6 resting upon the inner or upper surface of said bottom as shown. The rear side wall 3 has attached thereto two outer end pieces 10, each of which has cut through it an inverted U-shaped slit or slot the horizontal and vertical portions of which are equi-distant from the top and side edges thereof, thus forming a tongue 11 which is adapted to engage the opening 5 in the inner end piece 4 and lock said end pieces together.

The tongue 11 is equal in width to the length of the slot or opening 5 and its edges are at the same distance from the top and ends of said outer end piece or portion 10 that said slot 5 is from the lower end of the inner end piece or portion 4. When using thick stock it is an advantage to have the openings through the end pieces 4 and 10 in the form of slots of a width equal to the thickness of the material.

Each outer end piece 10 has on one edge thereof a flap 12 which is bent on the dotted line 13 into a position at a right angle to the end 10, and also has formed on its other edge a flap 14 as shown.

The outer end pieces 10 are bent on the dotted lines 15 into positions at right angles to said back wall 3, which is in turn bent on the dotted line 16 into a position at a right angle to the bottom 1, and the flap 12 is passed between said bottom 1 and the flap 6 of the inner end piece, and the tongues 11 are passed through the slots or openings 5 to lock said inner and outer end pieces together, and then the flaps 14 are turned on the dotted lines 17 into positions parallel to the bottom 1 to cover a small section of each end of the box.

The end portions 4 and 10 are each of a length equal to the width of the box and when locked together by the tongue 11 form an end wall of double thickness, thereby securing great rigidity to the box which is increased by the inner edge of the portion 4 abutting against the inner wall of the back 3. When the portions 4 and 10 are thus locked together the edges of the slot in the outer end portion 10 are left exposed, thus giving the end a depressed panel appearance.

The back 3 has connected to its upper edge the cover 18 provided with the flap 19 which is turned on the dotted line 20 into a position at a right angle to the cover 18 and then the cover is folded on the dotted line 21 into a position parallel to the bottom 1 so as to rest upon the upper surfaces of the

flaps 14 with the flap 19 extending into the box between the box front and the front ends of the flaps 14.

It is obvious that when the end portions 4 and 10 are locked together by the insertion of the tongue 11 in the slot 5 which is of the same length as the width of the tongue, all longitudinal movement of said end portions 4—10 relative to each other is prevented.

The flaps 12 on the lower edges of the outer end pieces may be omitted, without departing from the principle of the invention, as shown in Fig. 3.

It is obvious that the locking tongue in the end portions 10 may be formed by cutting two parallel slits therein and connecting these slits at one end by means of a diagonal slit, thus forming a tongue such as is shown at 11* in Fig. 3 of the drawing, one end of the tongue being somewhat longer than the other and thereby facilitating the insertion of the tongue through the slit 5 of the end portions 4.

What I claim as new and desire to secure by Letters Patent of the United States, is

1. In a knock-down box, a blank comprising a main body to fold on parallel lines to form the bottom, front and rear sides, the cover and a flap extending from said cover, inner rectangular end portions connected to and projecting from the opposite ends of the front side and arranged to be folded at right angles thereto, outer rectangular end portions connected to and projecting from the opposite ends of the rear side arranged to be folded at right angles thereto and overlap the other end portions, flaps connected to the lower edges of said inner end portions and foldable at right angles thereto, a pair of flaps connected to the upper edge of said outer end portions and foldable at right angles thereto, and means forming part of said end portions for locking them together and preventing their longitudinal separation.

2. In a knock-down box, a blank comprising a main body to fold on parallel lines to form the bottom, front and rear sides, the cover and a flap extending from said cover, inner rectangular end portions equal in length to the end of the box to be made and connected to and projecting from the opposite ends of the front side and arranged to be folded at right angles thereto, so that the free edges thereof will abut the inner wall of the rear side of the box; outer rectangular end portions equal in length to the end of the box to be made and connected to and projecting from the opposite ends of the rear side arranged to be folded at right angles thereto and extends to the front side of the box, flaps connected to the lower edges of said inner end portions foldable at right angles thereto, and extending from the front inner wall of the box to the rear inner wall thereof; a pair of flaps connected to the upper edge of said outer end portions foldable at right angles thereto, over the inner end portion and extending from the front inner wall to the rear inner wall of the box; and means for locking said end portions together to prevent movement longitudinally of each other.

3. In a knock-down box, a blank comprising a main body to fold on parallel lines to form the bottom, front and rear sides, the cover and a flap extending from said cover, inner rectangular end portions connected to and projecting from the opposite ends of the front side and arranged to be folded at right angles thereto, outer rectangular end portions connected to and projecting from the opposite ends of the rear side arranged to be folded at right angles thereto and overlap the other end portions, flaps connected to the lower edges of said inner end portions and foldable at right angles thereto, a pair of flaps connected to the upper edge of said outer end portions and a pair of flaps connected to the lower edge thereof all of said flaps being foldable at right angles thereto, and means forming part of said end portions for locking them together to prevent movement longitudinally of each other.

4. In a knock-down box, a blank comprising a main body to fold on parallel lines to form the bottom, front and rear sides, the cover and cover flaps, inner end portions connected to and projecting from the opposite ends of the front side and arranged to be folded at right angles thereto, outer end portions connected to and projecting from the opposite ends of the rear side arranged to be folded at right angles thereto, flaps connected to the lower edges of said inner end portions and foldable at right angles thereto, a pair of flaps connected to the upper edge of said outer end portions and foldable at right angles thereto, each of one pair of said end portions having cut therethrough a slit arranged parallel to the upper edge thereof, and a locking tongue formed in each of the other pair of end portions by cutting a slit parallel to the upper edge thereof and two other slits extending from the ends of and at right angles to the first-named slit and with their terminal ends at equal distance from the two edges of said end portion.

5. A knock-down box formed of a single piece of material cut and scored to form the bottom, front and rear sides, cover, two pairs of end pieces having areas equal to the size of the end of the box, inwardly folded flaps on the lower edges of one pair of said end pieces, inwardly folding flaps on the upper edges of the other pair of end pieces, a pair of locking tongues, and a pair

of locking openings formed in said end pieces parallel to the top edges thereof and so arranged relative to each other that the inner and outer end pieces may thereby be locked together and present the appearance of a rectangular panel in the outer surface of the box end.

6. A knock-down box formed of a single piece of material cut and scored to form the bottom, front and rear sides, cover, two pairs of end pieces having areas equal to the size of the end of the box, inwardly folded flaps on the lower edges of one pair of said end pieces, inwardly folding flaps on the upper and lower edges of the other pair of end pieces, a pair of locking tongues, and a pair of locking openings formed in said end pieces parallel to the top edges thereof and so arranged relatively to each other that the inner and outer end pieces may thereby be locked together and present the appearance of a rectangular panel in the outer surface of the box end.

7. A knock-down box formed of a single piece of material by folding said material on parallel lines to form a bottom, front and rear sides, a cover and a flap extending from said cover, and on other lines at right angles to said parallel lines to form inner and outer rectangular end pieces each having an area equal to the size of the end of the box, inwardly folded flaps on the lower edges of each of said end pieces, inwardly folded flaps on the upper edges of said outer end pieces, and means forming part of said end pieces for locking them together to prevent movement longitudinally of each other.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses, on this twenty-eighth day of September A. D. 1904.

JAMES W. McINDOE.

Witnesses:
N. C. Lombard,
Wm. E. Hingston.