K. A. KENDRICK.

PAPER BOX.

APPLICATION FILED JULY 20, 1914.

1,135,588.

Patented Apr. 13, 1915.

2 SHEETS—SHEET 1.

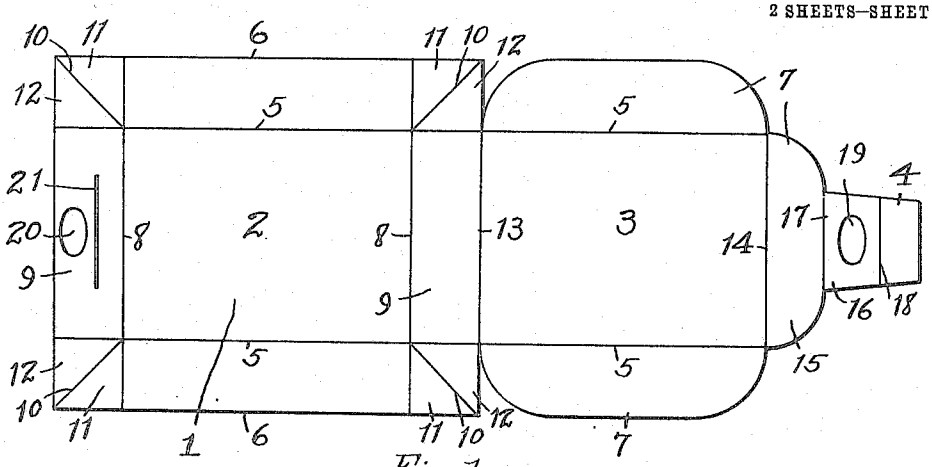


Fig. 1.

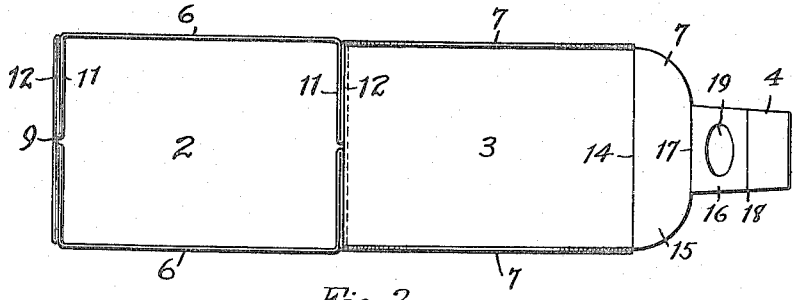


Fig. 2.

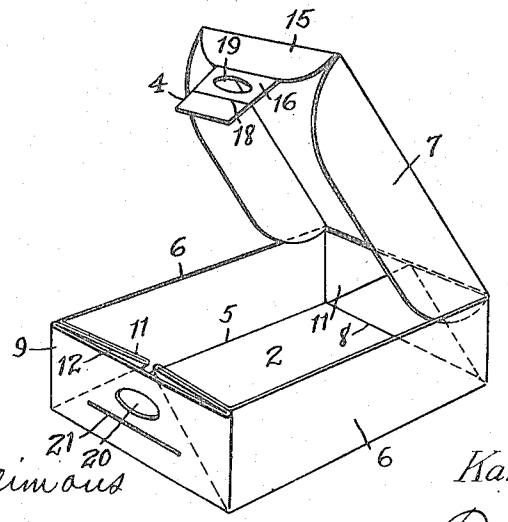


Fig. 3.

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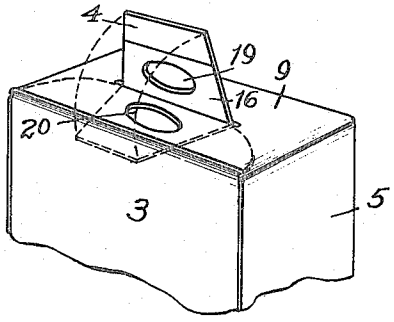


Fig. 4.

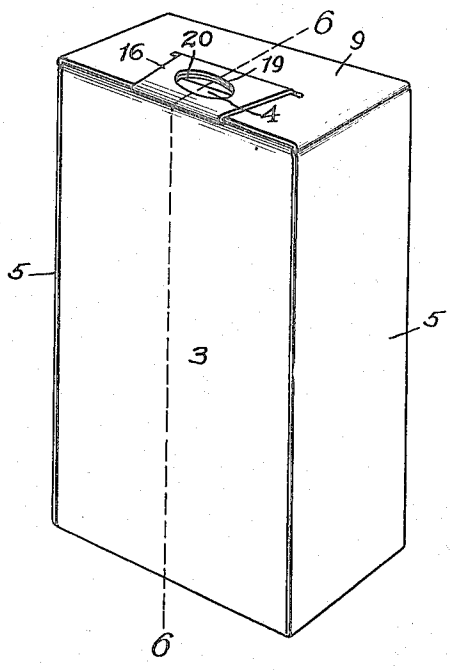


Fig. 5.

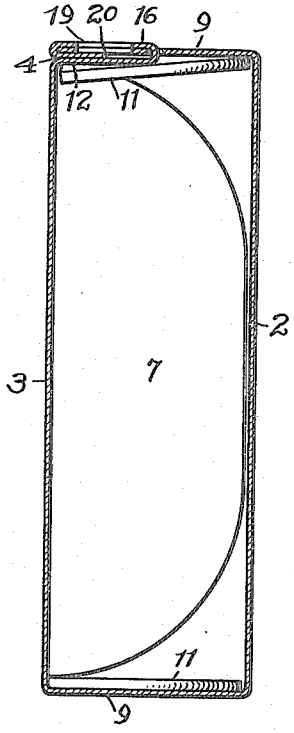


Fig. 6.

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UNITED STATES PATENT OFFICE.

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PAPER BOX.

1,135,588. Specification of Letters Patent. Patented Apr. 13, 1915.

Application filed July 20, 1914. Serial No. 851,871.

To all whom it may concern:

Be it known that I, KARL A. KENDRICK, a citizen of the United States, residing at Detroit, in the county of Wayne, State of Michigan, have invented certain new and useful Improvements in Paper Boxes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

This invention relates to paper boxes and especially to that class of boxes formed by folding a single flat piece or blank into the desired shape, and consists in the construction and arrangement of parts as hereinafter more fully set forth and pointed out particularly in the claims.

The object of the invention is to provide a paper box or carton that may readily be formed to shape from a flat blank of strawboard or heavy paper, which shall be strong and simple in its construction, economic in the use of stock, and cheap to manufacture; wherein provision is made for detachably locking the complementary portions of the box together, and also providing for the permanent sealing of the locking parts to serve as a guard against tampering with the contents of the box, the construtcion being such as to enable the shipping of the blanks in the flat or knock-down condition to be readily folded into the form of a box when desired for use.

The above object is attained by the employment of the structure illustrated in the accompanying drawings, in which:

Figure 1 is a plan view of a paper blank from which the box is formed, in which all the parts are integral. Fig. 2 is a plan view of the blank folded into position to form the body and cover of the box, in which the end wing and locking tongue of the cover are shown in the flat or unfolded position. Fig. 3 is a perspective view of the box showing the cover with its locking tongue in position to be folded upon and engaged with the body of the box. Fig. 4 is a fragmentary perspective view of the locking end of the box showing the tongue of the cover engaged with an aperture in the end of the box, in position to be folded over and engaged with the end of the box. Fig. 5 is a perspective view of the box completed and closed, showing the locking tongue folded over upon the end of the box and entered at its free end between the end members of the box and cover. Fig. 6 is a transverse longitudinal section through the box in its closed and locked position, taken on dotted line 6—6 of Fig. 5.

Referring to the drawings by the characters of reference marked thereon, 1 designates the paper blank which is polygonal in its general form and comprises a rectangular body portion 2 from which the box proper is formed. Adjoining one end of said rectangular body portion is a trifoliated or winged extension from which the cover 3 of the box is formed, and extending from the endmost wing of said cover is a foldable tongue 4 by means of which the end of said cover is secured to the body of the box.

The general shape of the blank is secured by cutting or stamping with dies of suitable shape from a strip of stock of the desired width or length to accommodate the width or length of the blank, as may serve to best advantage.

As a means of enabling the several portions of the blank to be readily folded into position, the face of the blank is scored with indentations or depressions along the lines upon which the folds are to be made in the usual manner, and in carrying out the present structure parallel lines 5 are scored longitudinally of the body of the blank at a suitable marginal distance from the edges thereof to form the lines of fold of the side walls 6 of the body of the box and to define the lines of fold of the curved side wings 7 of the cover portion 3. Crossing the lines 5 transversely of the body portion 2 of the blank at a distance from the ends equal to the width of the side walls 6, are scored lines 8, which define the lines of fold of the end walls 9 of the body of the box. Extending diagonally across the squared corner portions formed by the intersecting scored lines 5 and 8 and the corners of the body of the blank, are scored lines 10 which extend from the outer to the inner corners of said squared portions and define the lines of fold of the triangular portions 11 and 12, respectively, of the adjoining side and end walls 6 and 9 of said blank.

Upon the line of juncture between the

body portion 2 of the blank and the cover member 3 is scored a line 13 which terminates upon the scored lines 5, and defines the line upon which said cover portion is folded to form a hinge connection with its corresponding end wall 9 of the body of the box. Scored across the face of the cover member 3 in line with the outer ends of the wings 7 forming the side walls of said cover is a line 14 which defines the line of juncture of the curved wing or lap 15 which forms the end wall of the cover portion of the box. Extending centrally from said curved wing 15 is the base portion 16 of the tongue, having a scored line 17 at its point of juncture with the wing 15 upon which said tongue is adapted to fold. At a point midway the length of the tongue 4 is a scored line 18 extending transversely across said tongue, upon which the free end portion of said tongue may be folded.

Formed centrally through the tongue 4 in the base 16 thereof, is an aperture 19 which is adapted to register with a similar aperture 20 formed through the opposite end wall 9 of the body of the blank when said tongue 4 is entered through the slot 21, also formed through said end wall 9, for the purpose of locking said cover to the body of the box when closed.

The blank being thus formed and scored is folded into the form of a box by folding upwardly at right-angles to the plane of the face of the blank the side and end walls 5 and 9, respectively, the bottom faces of the triangular corner portions 11 and 12 folding upon each other as the upper faces of the triangular portions 11 fold at right-angles to their corresponding side walls 5, while the upper faces of the triangular portions 12 fold in contact with the inner faces of their corresponding end walls 9, as the ends of said side and end walls are brought together in vertical contact, the diagonally folded corner portions standing in opposite directions across the end walls of the box upon the inner faces thereof, as clearly shown in Fig. 2, in which the end wing and tongue of the cover are shown in the extended or unfolded position.

In Fig. 3 the body and cover of the box are shown in their complete folded forms as they would appear prepartory to closing the two parts of the box together, in which the cover swinging upon its hinged connection with one end of the body of the box presents the ends of the curved side wings within the side walls of the body of the box, while the end wing and tongue of the cover are presented to the opposite end of the body of the box so as to enable said tongue to be passed between the infolded triangular corner portions and the end wall of the box, and to be inserted outwardly through the slot 21 for the purpose of locking said cover to the body of the box when closed in the manner illustrated in Fig. 4. The tongue may then be folded down into contact with the outer face of the end of the box in the manner indicated by dotted lines in Fig. 4, in which position the aperture 19 of said tongue will be caused to register with the aperture 20 of the end of the box, when the free end of said tongue is folded on its scored line 18 over the free edge of the end of the box and returned between the inner face of the end of the box and the outer face of the end wing of the cover, as clearly shown in Figs. 5 and 6, in which position said tongue serves to securely lock the end of the box and at the same time the free end of the tongue is engaged and locked between the meeting members in a manner to guard the end of said tongue against contact which might tend to disengage it. The edge at the extreme end of the tongue in its unfolded position intersects the registering apertures 19 and 20 in the cover and end of the box, respectively, and is therefore exposed in a manner to permit the insertion of a finger to engage said tongue and force it outward from its confined position and enable the tongue to be unfolded and withdrawn from its engaging slot when desirous of opening the box.

The aperture in the tongue and end of the box, may be dispensed with without detracting materially from the efficiency of the locking feature of the tongue, which resides essentially in the employment of said tongue in connection with the slot in the end of the box and the scoring of the tongue in a manner to permit the reverse folding of the end of the tongue and its insertion between the inner face of the end of the box and the outer face of the wing of the cover to which said tongue is attached.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. A paper box comprising in an integral structure, a blank formed and scored to provide a body portion having foldable side and end members connected by foldable corner portions, a slot in one of said end members, a cover member hinged to the other of said end members and having foldable side and end wings adapted to lie within the side and end members respectively of said body portion, a tongue extending from said foldable end wing adapted to pass through the slot of said end member and to fold over the free edge of said end member onto the face of said end wing.

2. A paper box comprising an integral structure, a blank formed and scored to provide a body portion having foldable side and end members connected at their adjoining ends by diagonally foldable corner portions, a cover portion hinged to one of the end

members of said body portion and having foldable side and end wings, a slot in the other end member of said body portion, the side wings of said cover portion adapted to lie within the side members of said body portion and the end wing of said cover portion adapted to lie within and between the end member of said body portion and the foldable corner portions thereof, and a tongue on said wing for detachable engagement with said slot.

In testimony whereof, I sign this specification in the presence of two witnesses.

KARL A. KENDRICK.

Witnesses:
B. F. WHEELER,
M. E. BROESAMLE.