D. J. FERRY.
Paper-Box.

No. 221,165. Patented Nov. 4, 1879.

FIG. 1.

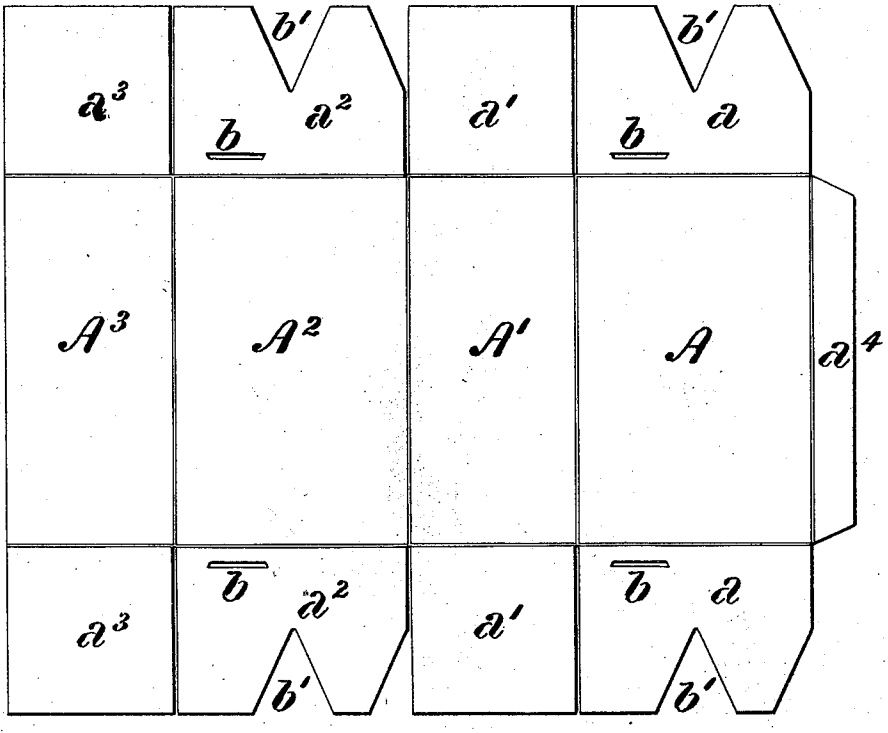


FIG. 2.

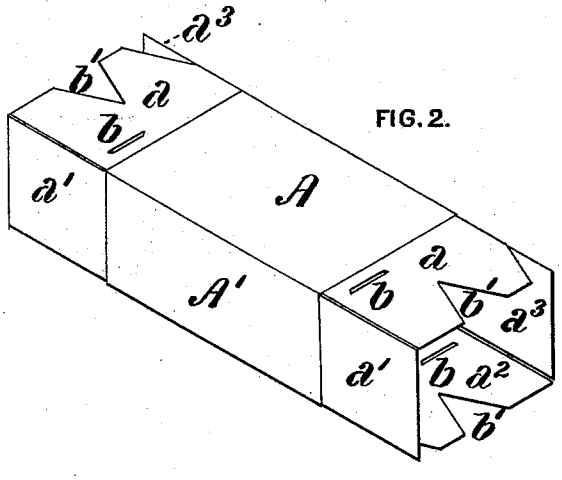


FIG. 3.

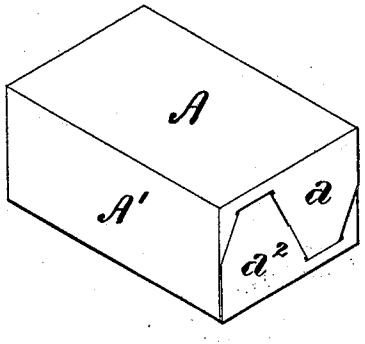
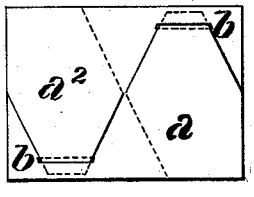


FIG. 4.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN PAPER BOXES.

Specification forming part of Letters Patent No. **221,165**, dated November 4, 1879; application filed September 29, 1879.

To all whom it may concern:

Be it known that I, DANIEL J. FERRY, of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Paper Boxes, of which improvements the following is a specification.

My invention relates to paper or pasteboard boxes formed of a single piece or blank; and its object is to provide a box having a simple, effective, and easily-operated end fastening, and which can be manufactured with an economical use of material; to which ends my improvements consist in a blank which is cut and creased in manner as hereinafter described, and a box constructed by folding the several portions of said blank into the form of a solid having rectangular surfaces, and securing the ends thereof by tapered locking-flaps, all as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a plan view of a blank cut and creased in accordance with my invention; Fig. 2, an isometrical view showing the same folded into a rectangular open-ended tube; Fig. 3, a similar view showing the completed box with its ends closed; and Fig. 4, an end view, in elevation, of the box.

The blank which I provide for the purpose of carrying out my invention consists of a single piece of paper or pasteboard cut or stamped and creased in the form shown in Fig. 1, referring to which it will be seen that the blank has four plain rectangular body-sections, A A′ A^2 A^3, two of which, A and A^2, serve to form the top and the bottom of the box, and the other two, A′ and A^3, its sides.

Plain rectangular flaps a' a' and a^3 a^3 adjoin the ends of the sections A′ and A^3, respectively, and locking-flaps a a and a^2 a^2, respectively, adjoin the ends of the sections A and A^2. A connecting-strip, a^4, adjoins the side of one of the outer body-sections, A or A^3, and serves to enable said section to be connected to the opposite outer body-section by glue, stitching, or metallic fastenings, so as to form the blank into a rectangular open-ended tube. The plain rectangular end flaps, a' a' and a^3 a^3, serve to close the ends of the box, and the locking-flaps a a and a^2 a^2 fasten the end flaps in position when closed. Each of the locking-flaps a a and a^2 a^2 has a slot, b, formed within it parallel and adjacent to the adjoining edge of the body-section with which it is connected, and its outer side is divided by a central triangular recess, b', extending one-half across the flap into two tongues, one of which is symmetrically tapered on both sides, and the other, which is nearest to the slot b, has one of its sides tapered and one perpendicular to its end.

The opposite tongues of the flaps of each of the sections A and A^2 are, respectively, similar in form and dimensions, and the slots b are similarly located upon the opposite locking-flaps of each of the sections A and A^2, the center of each slot coinciding with the center line of the double-tapered tongue of one of the locking-flaps of the opposite body-section when the blank is folded into tubular form.

As a result of this construction I am enabled to provide a simple and effective means of locking the end flaps, a' a' a^3 a^3, in position when turned in to close the ends of the open tube formed by the union of the two side body-sections, A and A^3, each of the double-tapered tongues of the locking-flaps of one body-section entering the slot of one of the locking-flaps of the opposite body-section and passing over and bearing against the single-tapered tongue thereof.

Referring to Fig. 2, it will be seen that the end flaps project from the sides, and the locking-flaps from the top and bottom, of the tube or open-ended box therein shown. The ends of the box are closed by turning in the end flaps, a' a^3, one above the other, and the closed ends are held in position by inserting the double-tapered tongues of the locking-flaps in their corresponding slots, as shown in Figs. 3 and 4.

It will be observed that in the application of my improvements the waste of material involved in cutting out the blanks is but trifling, being only the small amount due to the formation of the tongues of the locking-flaps and the narrow side connecting-strip.

The locking device, which is simple, secure, and of easy operation, presents the advantages of locating the fastenings adjacent to diagonally-opposite corners of the box and of bringing the major portion of the overlapping edges

at each end of the box entirely within the periphery thereof, so that the same are correspondingly relieved from liability to displacement by the contact of the sides of the box with other articles.

I claim as my invention and desire to secure by Letters Patent—

1. A box-blank consisting of four rectangular main or body sections, four rectangular end flaps, and four locking-flaps, each locking-flap having one double-tapered and one single-tapered tongue and a slot for the reception of the double-tapered tongue of the next adjacent locking-flap, substantially as set forth.

2. A box consisting of a blank cut, creased, and folded into a rectangular tube, the ends of which are closed by overlapping end flaps and secured, adjacent to diagonally-opposite corners, by locking-flaps, each of which has a double-tapered tongue entering a slot in a similar flap, substantially as set forth.

3. An end fastening for a paper box, consisting of two locking-flaps of similar form and dimensions, and respectively formed in one piece with the top and with the bottom of the box, each flap having one single-tapered and one double-tapered tongue and a slot, the double-tapered tongue of each flap overlapping the single-tapered tongue of the other and entering the slot thereof, substantially as set forth.

DANIEL J. FERRY.

Witnesses:
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