

H. R. HEYL.
Paper-Boxes.

No. 152,636.

Patented June 30, 1874.

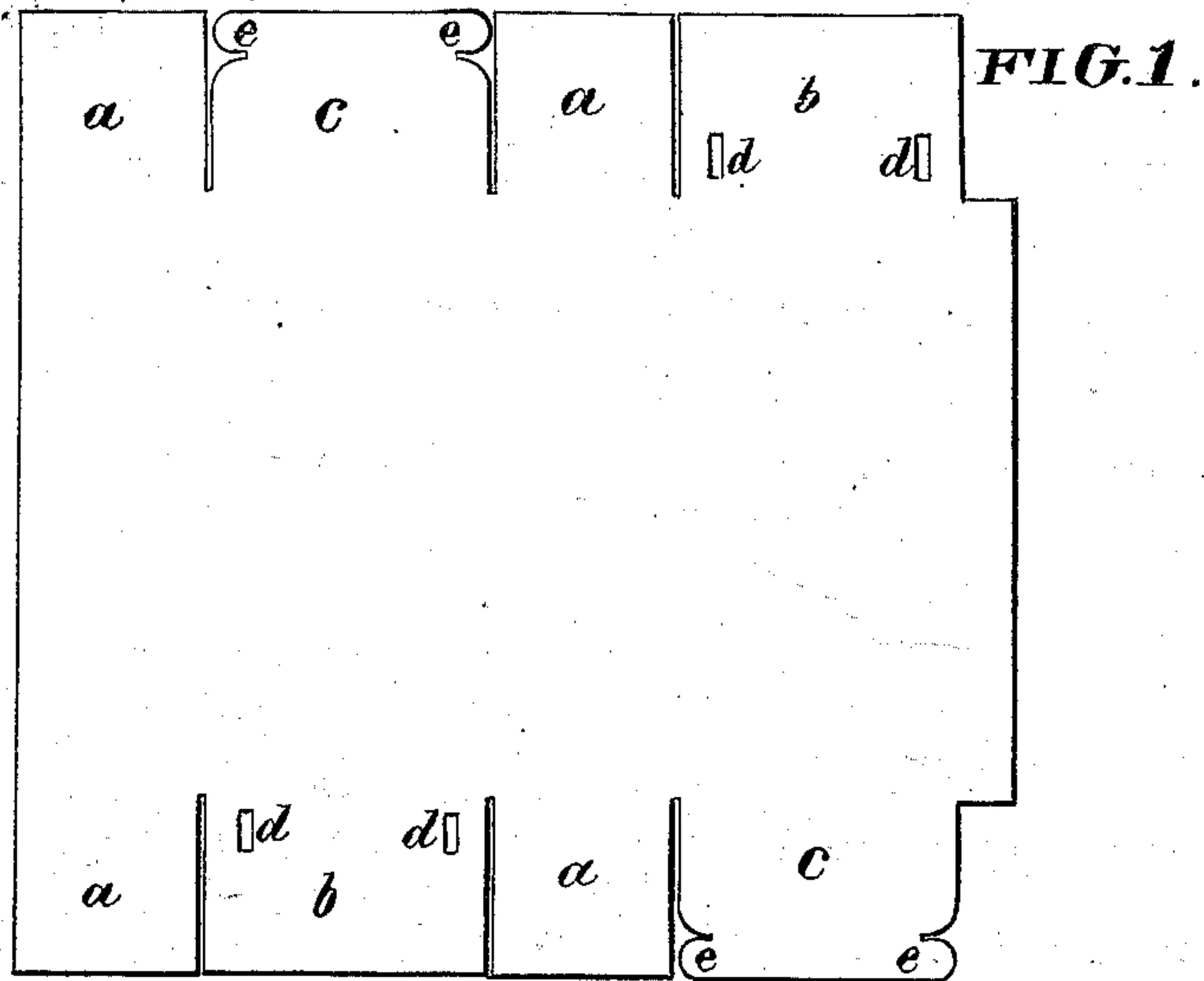


FIG. 2.

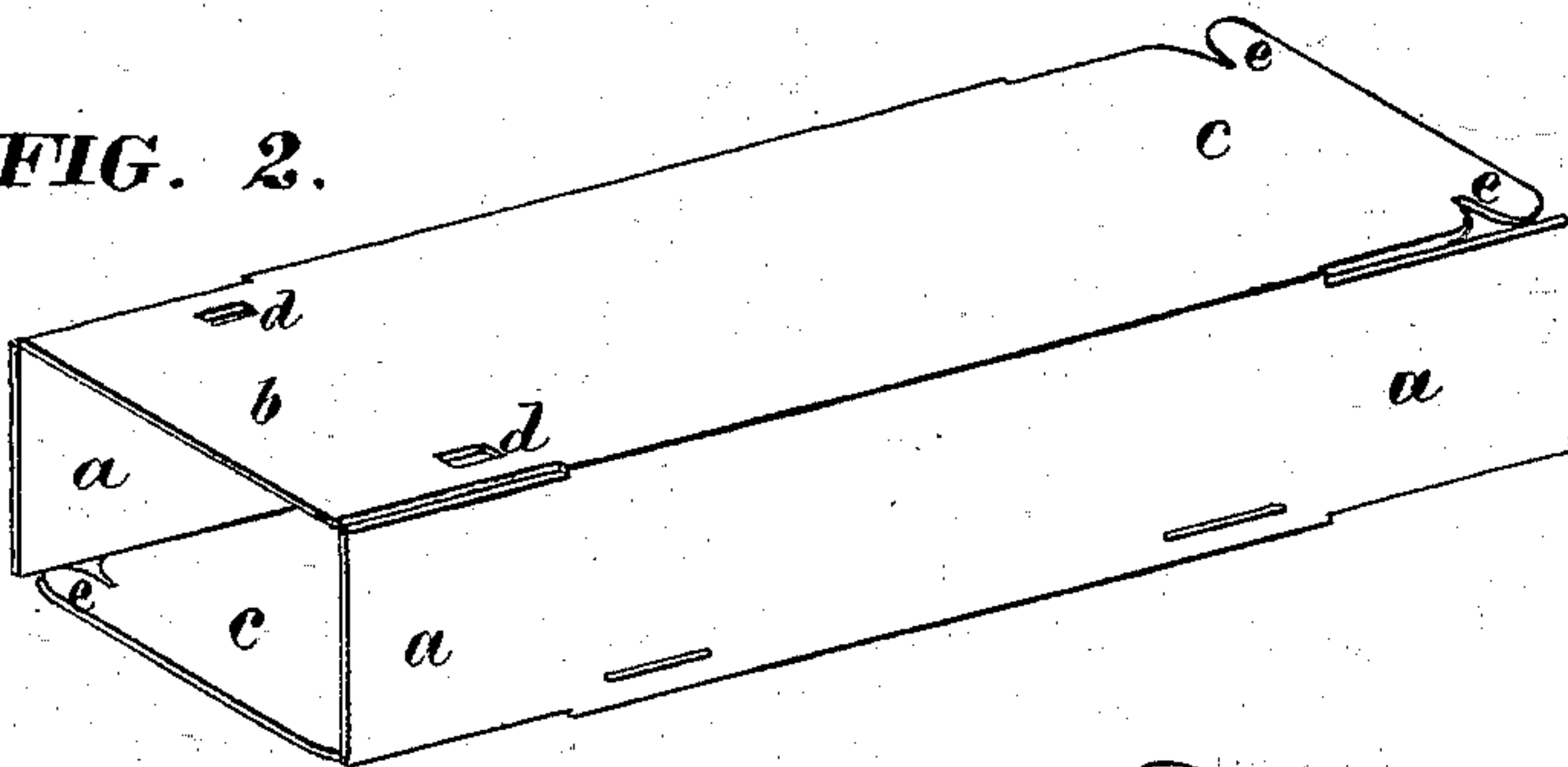


FIG. 3.

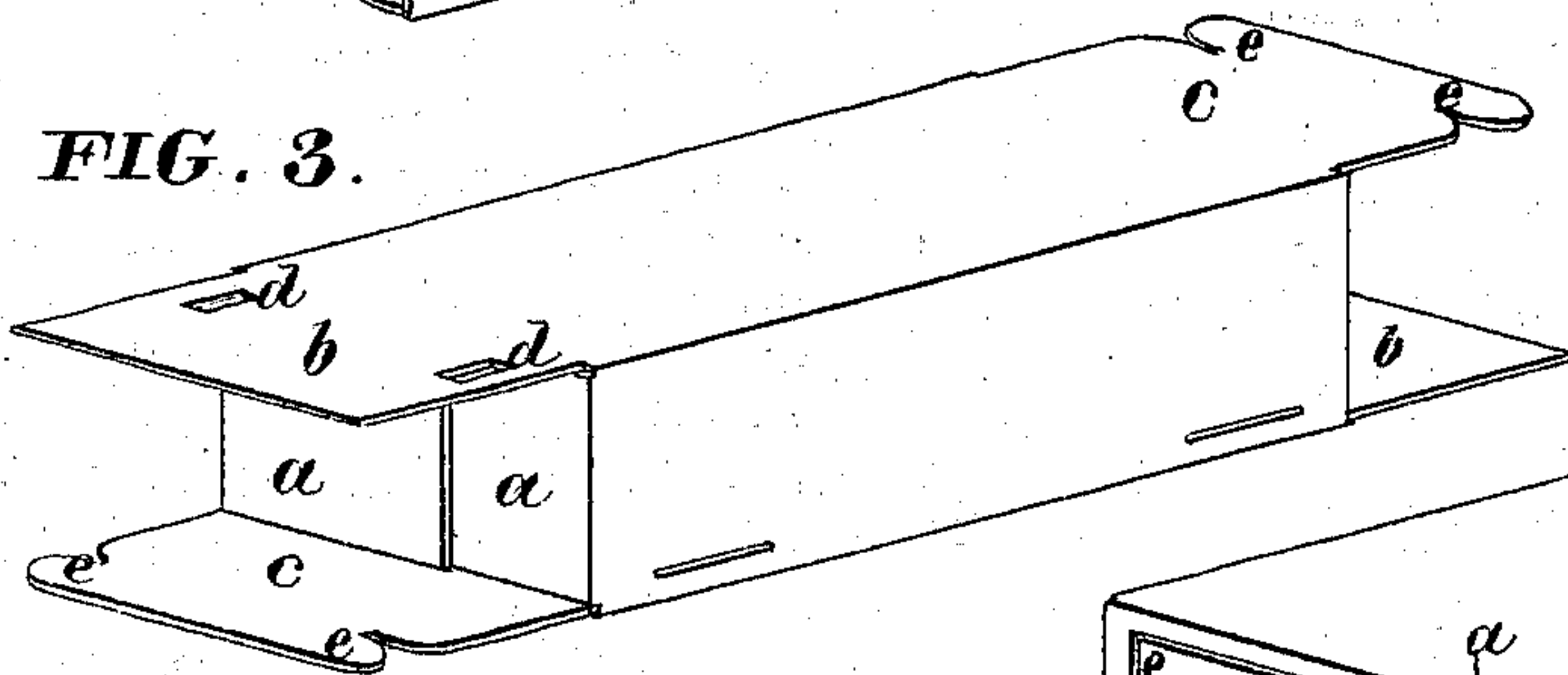
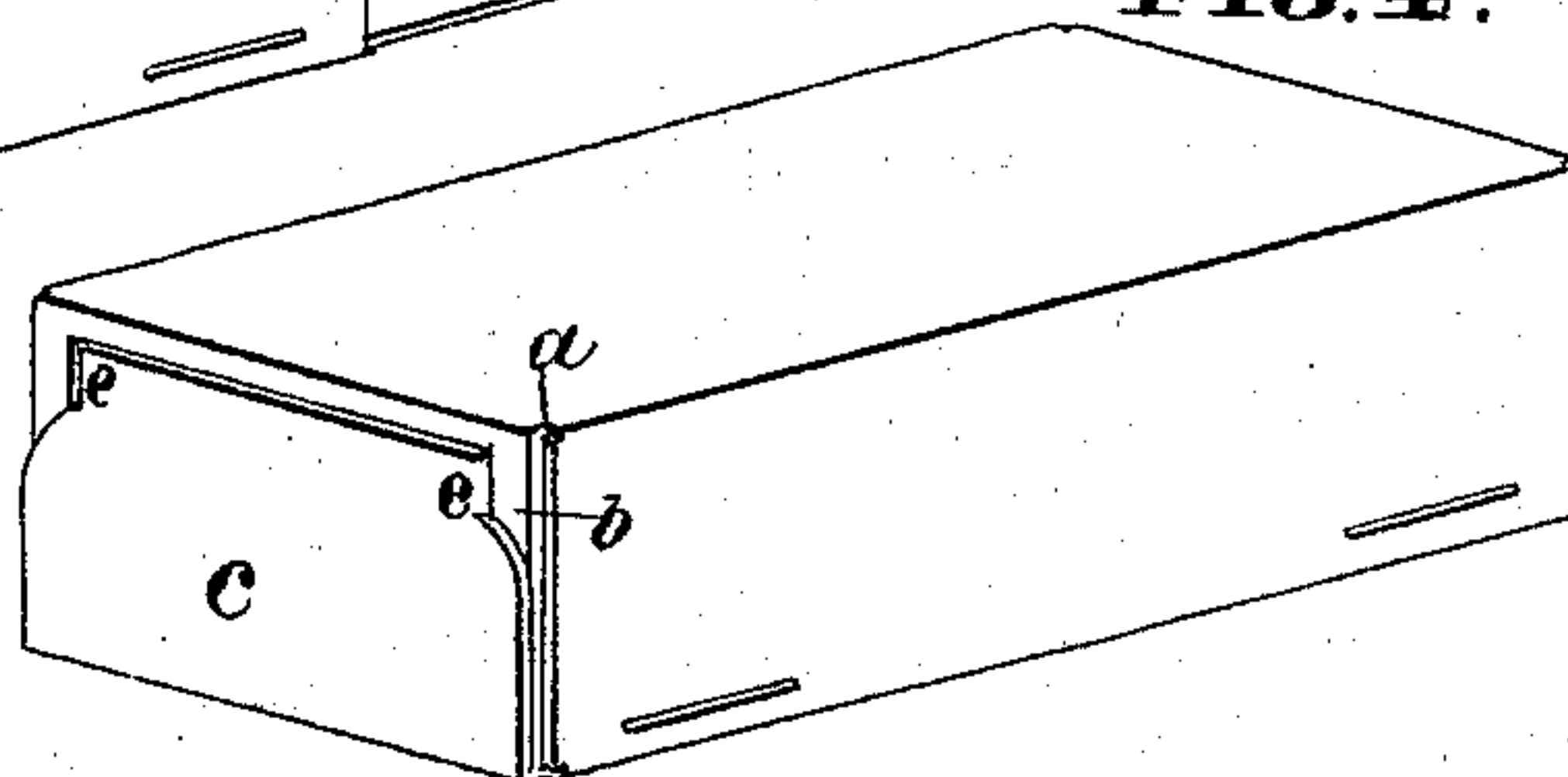


FIG. 4.



WITNESSES

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INVENTOR

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UNITED STATES PATENT OFFICE.

HENRY R. HEYL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE
AMERICAN PAPER-BOX MACHINE COMPANY, OF SAME PLACE.

IMPROVEMENT IN PAPER BOXES.

Specification forming part of Letters Patent No. **152,636**, dated June 30, 1874; application filed
February 2, 1874.

To all whom it may concern:

Be it known that I, HENRY R. HEYL, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Paper Boxes, of which the following is a specification:

My invention consists in making wrappers of tubular form with one or both of the ends constructed with two or more flaps to fold one on another, the outer flap being provided with laterally-projecting tongues entering corresponding slits or openings in the flap below, so as to constitute an effective lock, the line in which the tongues enter and leave the slits being at right angles to the line of strain produced by internal pressure. The principal objects of the invention are to produce wrappers as neat and attractive as finished boxes with great economy in labor and material, and wrappers which may be quickly and securely locked so as to dispense with the need of tying.

In the accompanying drawing, Figure 1 is a plan of a blank adapted for folding into a package in accordance with my invention. Fig. 2 is a perspective view of the same folded into a tube preparatory to the folding of the ends. Fig. 3 is a perspective view of one end partially closed. Fig. 4 is a perspective view of the closed package.

The blank for my wrapper is made essentially as illustrated in Fig. 1, the proportions being, of course, varied according to the size and shape of wrapper desired. The blank is then formed into a rectangular tube, as illustrated in Fig. 2, or a tube of any other angular form, and I prefer to secure the seam with wire staples made and applied by machinery. This may be done by the machine described in patent No. 132,078, granted October 8, 1872, to the American Paper-Box Machine Company as assignee of myself and August Breh-

mer, or by a more simple machine of my own invention, for which I shall apply for a patent.

Each extremity of the tube thus formed will be seen to consist of flaps *a a b c* equal in number to the sides of the wrapper. In this illustration of a rectangular tube and wrapper, *a a* represent the inner flaps; *b*, the third flap, provided with slits or apertures *d*, to receive the tongues; and *c*, the outer flap, on which the lateral tongues *e* are formed. In closing the ends of the wrapper, the flaps *a a* are first folded in, then the third flap *b*, and, lastly, the tongued flap *c*. The tongues *e* are then inserted in the slits *d*. It will now be apparent that the line of projection of the tongues *e e*, and the line in which they enter the slits *d d*, being transverse to the line in which an opening strain will be applied to the flaps *b c* by internal pressure, such pressure will only draw the base of each tongue edgewise against the end of the slit, and will have no tendency to draw the tongue out. The lateral tongues thus constitute an effective lock, entirely avoiding the necessity of tying the package, and thus distinguishing my device clearly from any in which the tongue is inserted and withdrawn in the line of the opening strain, or in which the tongue projects longitudinally from its flap, or is folded around the box in the same direction as the flap that it is intended to secure.

I claim as my invention—

A paper or pasteboard wrapper secured in a tubular form, and closed at one or both ends by portions of the sides thereof bent over and locked into each other by the laterally-extending tongues *e* and corresponding openings *d*, as described.

Witnesses: HENRY R. HEYL.
OCTAVIUS KNIGHT,
WALTER ALLEN.