No. 684,243. Patented Oct. 8, 1901.

O. HILLMANN.

FOLDING BOX.

(Application filed Jan. 23, 1901.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 2.

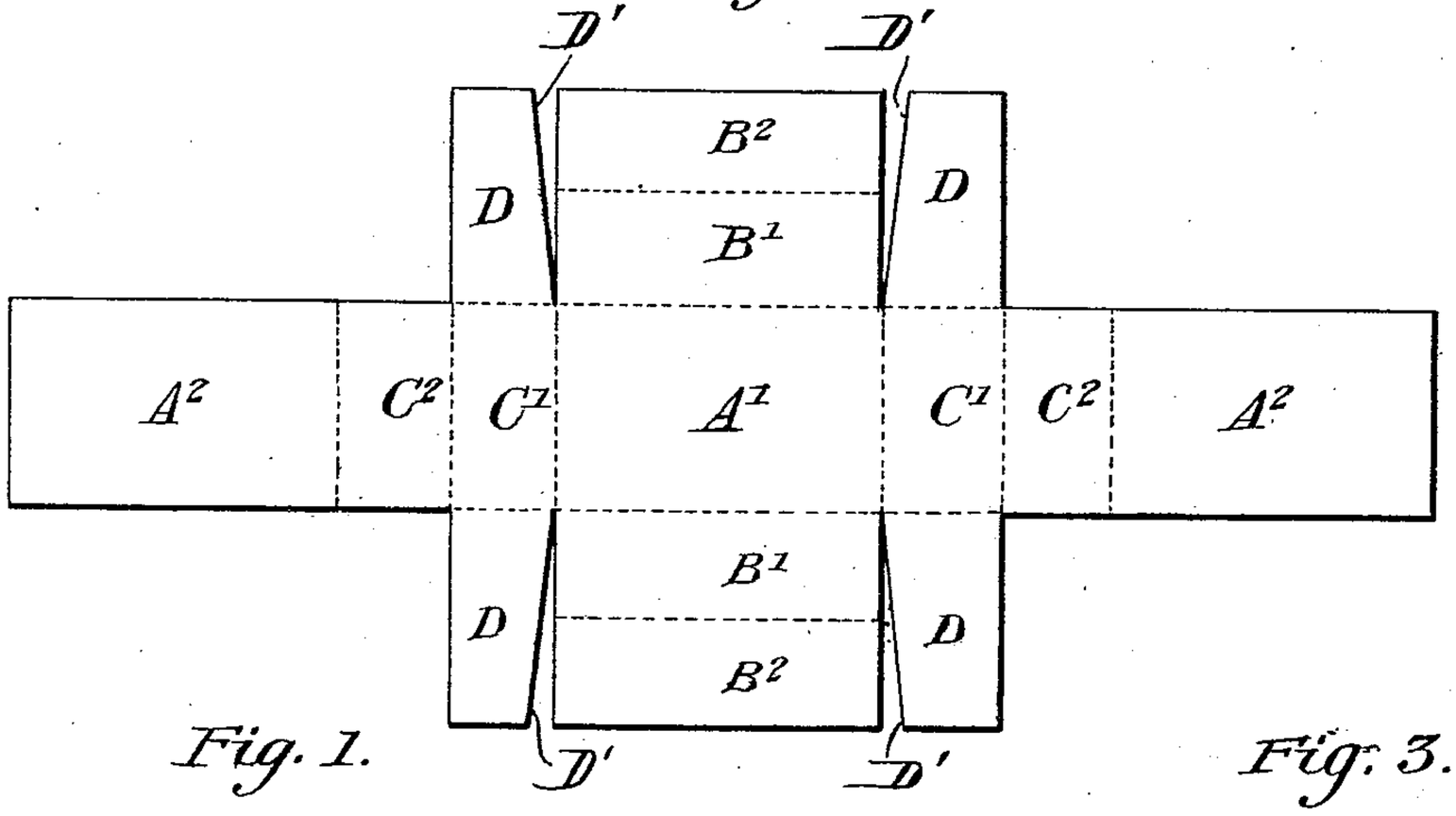


Fig. 1.

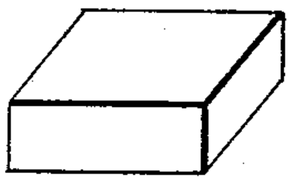
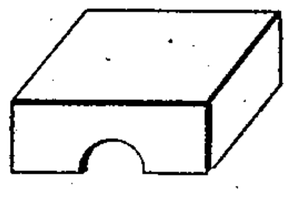
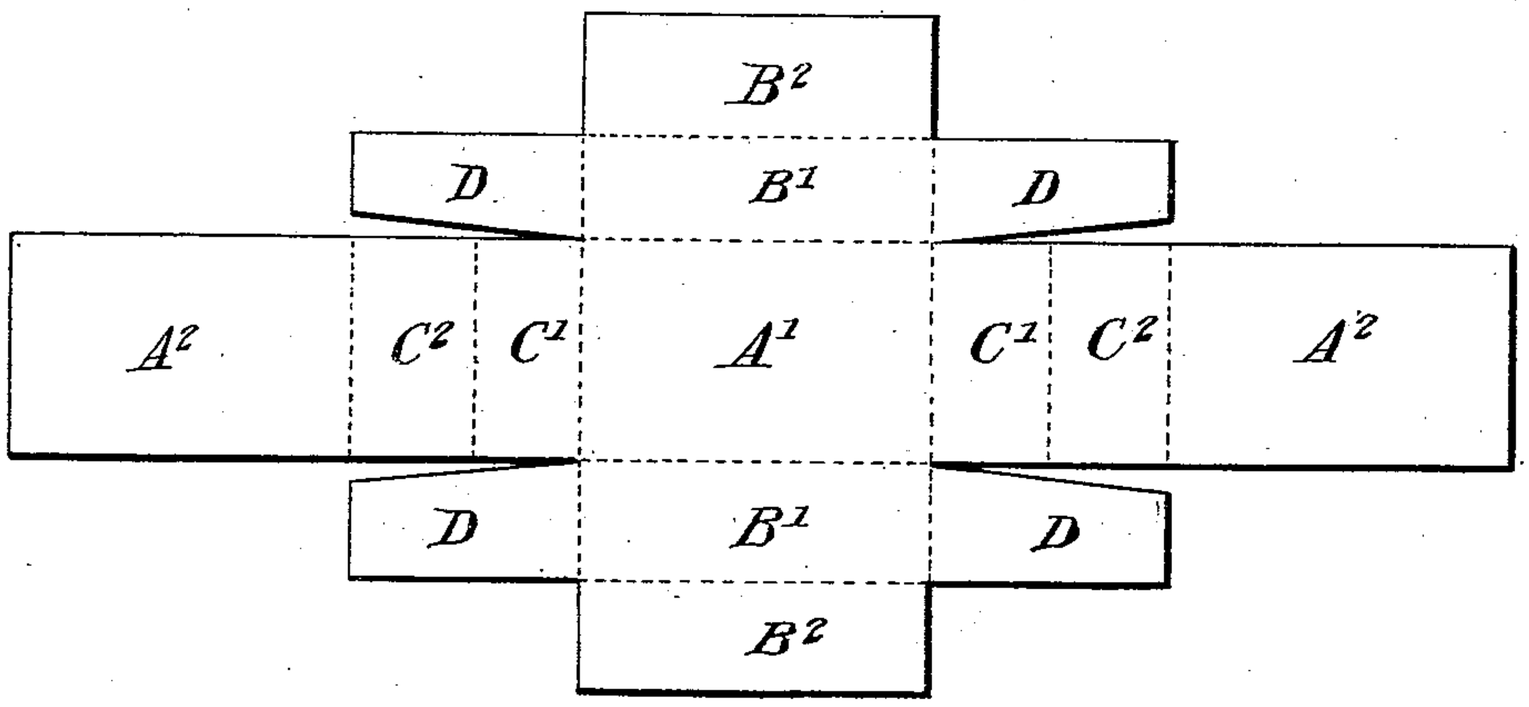


Fig. 4.

Fig. 3.





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No. 684,243. Patented Oct. 8, 1901.

O. HILLMANN.

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(Application filed Jan. 23, 1901.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 5.

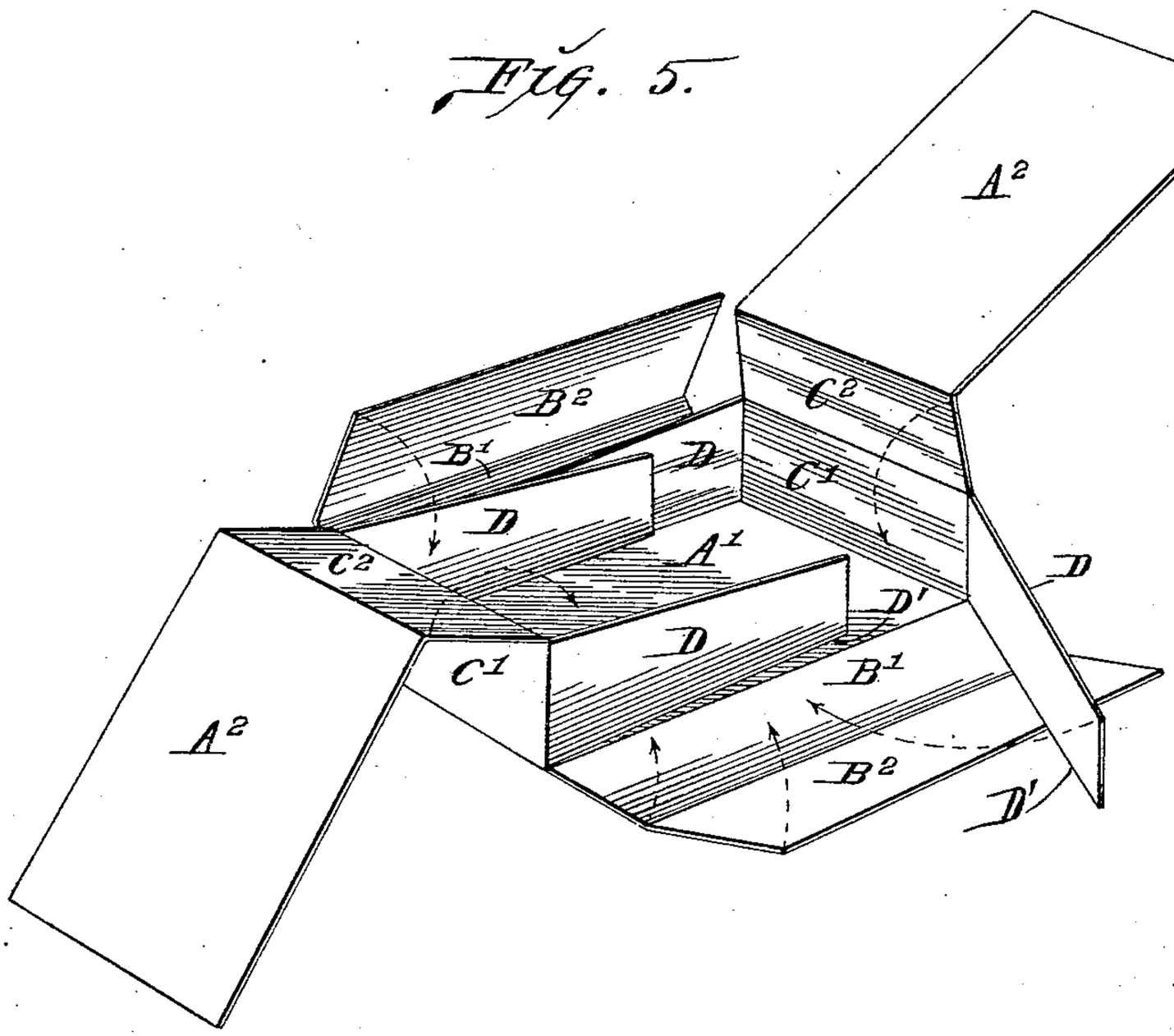


Fig. 6.

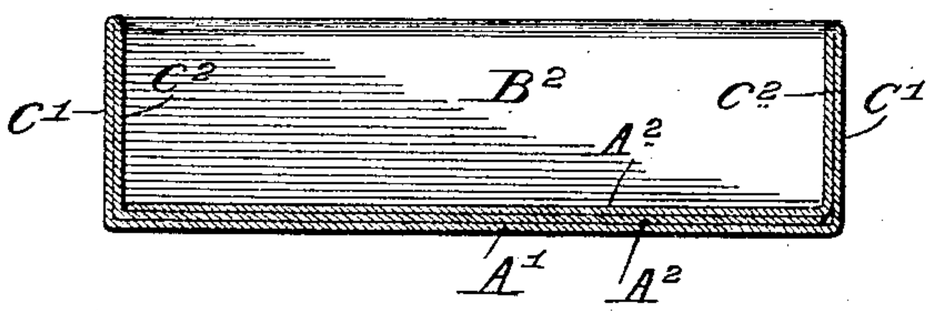
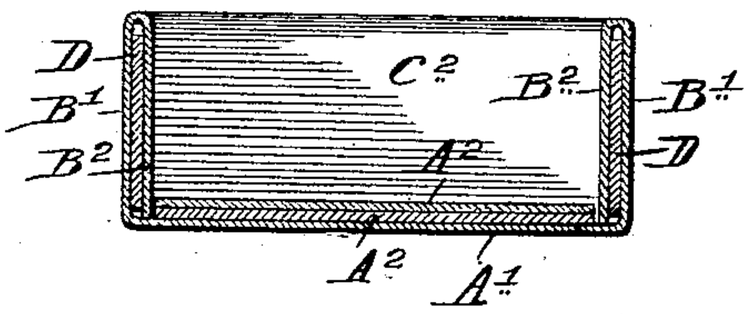


Fig. 7.



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UNITED STATES PATENT OFFICE.

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FOLDING BOX.

SPECIFICATION forming part of Letters Patent No. 684,243, dated October 8, 1901.

Application filed January 23, 1901. Serial No. 44,485. (No model.)

To all whom it may concern:

Be it known that I, OTTO HILLMANN, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Folding Paper Boxes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a paper-box construction composed of a series of sections formed in a blank and arranged to be folded in such manner that all of the sections may be brought into interlocking engagement to produce an article having characteristic firmness, strength, and durability.

The invention consists in features of novelty hereinafter fully described, and pointed out in the claim.

Figure 1 is a perspective view of my box. Fig. 2 is a view of the blank from which the box is constructed. Fig. 3 is a perspective view of the cover of the box. Fig. 4 is a view of the cover-blank. Fig. 5 is a perspective view of the box partly folded. Fig. 6 is a longitudinal sectional view of the box. Fig. 7 is a cross-sectional view of the box.

The box is made up of the blank shown in Fig. 1.

A′ designates a central section, at each side of which are pairs of side sections B′ and B², that meet at creases or scored lines, so that they may be folded with respect to each other and with respect to the central section. At each end of the central section are end sections C′ and C², there being a creased or scored line at the junction of the central section and the first end section and a creased or scored line at the junction of the two end sections.

A² designates retainer-flaps extended at creased or scored lines from the end sections C² by which they are carried.

D designates side flaps that are carried by the end sections C′ and are adapted to be bent on the creased or scored lines at the junction of the flaps and end sections. One edge of each side flap D, the one lowermost when the box is folded, is tapered or sloped, as seen at D′.

In Figs. 3 and 4 I have shown a suitable cover for the box herein described, but for which no invention is herein claimed. The cover is constructed from a blank similar in construction to the blank from which the box is made, and like designating characters are applied thereto to indicate the various sections thereof. The only distinction between the blank of the cover and the blank of the box is that the flaps D constitute end flaps in the cover and are carried by the side sections B′ instead of being carried by the end sections C′, as in the box. No further description of the cover is deemed necessary.

In making up the box the various members thereof are folded, as indicated in Fig. 5, the parts being brought together in the following manner: The end sections C′ are first folded upwardly into vertical positions, as shown, and the side flaps D, carried thereby, are then bent inwardly into approximate alinement with each other over the side edges of the central section A′ and so that they will overlap, as seen at the left side of Fig. 5. The side sections B′ are then bent upwardly into vertical positions, so that they will lie against the outer faces of the side flaps D, after which the side sections B² are folded over the upper edges of the side flaps and downwardly against the inner faces of said flaps, so as to inclose them and hold them together. The retainer-flaps A² are then carried inwardly one after the other and depressed to the bottom of the box, as seen in Figs. 6 and 7, the end sections C² being at the same time carried into the interior of the box to position them flatly against the inner faces of the end sections C′. The box is then complete and ready for use.

It will be seen that the positioning of the side flaps D between the inclosing side sections B′ and B² serves to firmly hold said side flaps, so that when the retainer-flaps A² are depressed into the box to retain the inner side flaps B² the escape of the flaps is rendered practically impossible. This result is obtained by reason of the side flaps being carried by the end sections, which renders it necessary for the side flaps to swing in the arc of a circle when the end flaps are moved outwardly, and this movement they cannot partake of when held depressed by the overlapping side sections B′ and B². The side flaps being depressed at their lower edges provide

for their more secure retention, inasmuch as the action of the overlapping side sections serve to press the tapering edges toward the bottom of the box and draw the corners of the box more tightly together when in folded condition.

I claim as my invention—

In a folding box, the combination of a central section, sections bent upwardly from the ends of the central section to form the outer walls of the ends; additional end sections bent downwardly from the up-bent end sections to form the inner walls of the ends, bottom sections bent horizontally from the inner-wall end sections to form additional thicknesses of the bottom commensurate with the central section, pairs of side-forming sections projecting from the central section forming inner and outer side walls of dimensions that cause the inner side walls to project down near the bottom and to be overlapped, when folded, by one or more of the bottom thicknesses to hold them in place, and side-forming flaps projecting at right angles from and integral with the outer-wall end sections severed from but coextensive with pairs of side-forming sections, whereby a blank is formed consisting of a rectangle, with but two projections therefrom, to wit, those formed by the bottom-forming sections.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

OTTO HILLMANN.

Witnesses:
OTTILIO HILLMANN,
JOHN EBERLE.