F. G. FEELEY.

PAPER BOARD BOX.

APPLICATION FILED JULY 31, 1914.

1,199,535. Patented Sept. 26, 1916.

Fig. 1

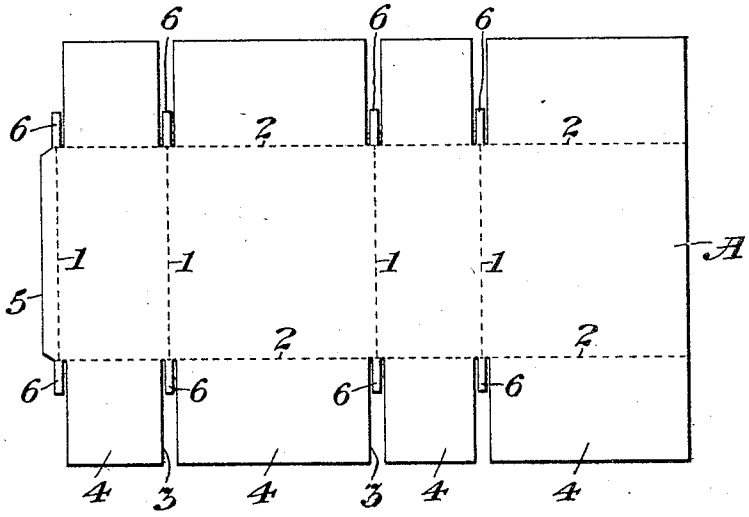


Fig. 2

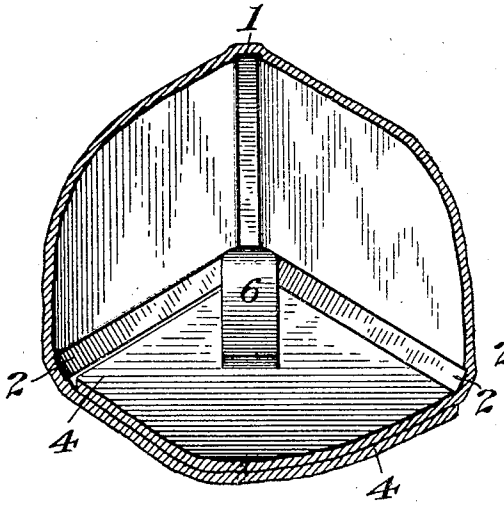
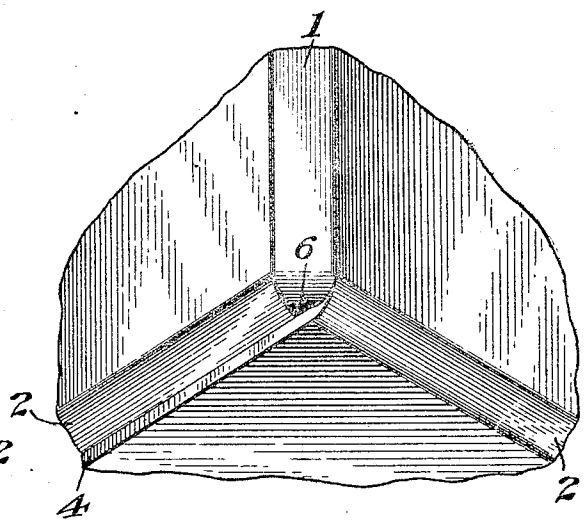


Fig. 3



WITNESSES

Chas. F. Clagett

C. J. Butler.

INVENTOR

Frank G. Feeley

BY

Chas. F. Pope

HIS ATTORNEY

UNITED STATES PATENT OFFICE.

FRANK G. FEELEY, OF CHICAGO, ILLINOIS, ASSIGNOR TO M. D. KNOWLTON COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

PAPER-BOARD BOX.

1,199,535. Specification of Letters Patent. Patented Sept. 26, 1916.

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To all whom it may concern:

Be it known that I, FRANK G. FEELEY, citizen of the United States, and resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Paper-Board Boxes, of which the following is a specification.

This invention relates to paper-board boxes, and has for its object to provide a novel form of box blank having associated therewith certain portions, which, when folded in proper relation to the other parts of the blank, constitute closures for the corner openings usually found in paper-board boxes. In the larger boxes in which relatively thick stock is employed, these openings assume such a large size as to be objectionable and to render the box unsuitable for packing purposes, where it is desired to protect the contents of the box against moisture, light, etc.

The invention, in a preferred form thereof, consists in so cutting the box blank that a portion of the stock is retained in the slots formed at the extremities of the bending lines, so as to constitute relatively small corner closing flaps adapted to be folded inwardly when the box blank is folded to completely cover the opening at the corner of the box resulting from the provision of the slots above-mentioned. The corner closure flap, therefore, constitutes an integral part of the box blank and does not affect the cost of production of the blank or the labor involved in the manufacture of the blank.

The invention is illustrated in the accompanying drawing, in which:—

Figure 1 is a plan view of the improved form of box blank; Fig. 2 is a broken perspective view of an inside corner of a box produced by folding the blank shown in Fig. 1; and Fig. 3 is a broken perspective view corresponding to Fig. 2, but looking at the box from the outside.

Referring to the drawing, the blank proper is indicated at A and may be formed in the usual manner, so far as the ordinary end flaps are concerned. That is, the blank A may be provided with the usual transverse bending lines or creases 1 and the longitudinal flap-bending lines or creases 2, transverse marginal slots 3 being provided at the extremities of the transverse bending lines 1 to form the customary flaps 4. The usual pasting flap 5 is also provided at one end of the blank. When a blank is made for a relatively large box, or in any other instance where it is desirable to use heavy material, it is necessary to make the slots 3 of sufficient width to permit a proper folding and interlapping of the flaps 4 when the blank is folded. It is obvious that when the blank is folded, openings will occur at the corners of the box, the size of which openings will depend upon the width of the slots 3, and also upon the distance which said slots extend toward the body of the box blank. In other words, if the slots 3 extend across the creases 2 to the inner side of these creases, as shown in Fig. 3, relatively large openings occur at the corners formed by the meeting of each three adjacent sides of the box. It has been proposed in practice to terminate the slots 3 at the outer side of the creases 2 to diminish the size of these openings, but in a box made from a blank of this character, the end flaps cannot be folded inwardly or outwardly without breaking or tearing the box material at the intersection of the slots 3 and the flap creases 2. It is, therefore, essential, in order to facilitate folding of the end flaps without the above-mentioned breaking and tearing action, that the slots 3 be extended across the creases 2. According to the present invention, this may be done without leaving the aforesaid objectionable openings at the corners of the box because of the provision of relatively small flaps 6 at the extremities of the transverse bending lines 1, which flaps constitute closures for the above-mentioned openings when the blank is folded. These flaps may be formed by not removing all of the material from the slots 3 when the blank is made. The result is the provision of the small tongue or corner closing flap 6 at the extremity of each transverse bending line and united with the main body of the blank at that portion thereof which constitutes the corner of the box when the blank is folded.

A blank formed as above described is folded in the usual manner, except that during the process of folding one end flap 4 over the other, the corner closing tongue or flap 6, between these two end flaps, is folded inwardly, as best shown in Fig. 2. The tongue or flap 6 is folded inwardly at each corner of the box, and, therefore, all the openings occurring at the corners of the box are completely closed, as clearly shown by

the single corner, illustrated in Fig. 3. In this way, a practically air-tight and light-tight container is provided which may be used for products which require a container which will protect the same from air, light, moisture and the like.

What I claim is:—

1. The combination with a box blank having closure flaps associated therewith, of a hinged corner-closing flap disposed between each two of said first-named flaps and adapted to be folded inwardly over the interior surface of said closure flaps to constitute closures for the openings occurring in the box at the corners formed by the meeting of each three adjacent sides of the box.

2. The combination with a box blank having end flaps adapted to be folded into substantially the same plane, of an integral corner-closing flap disposed between each two adjacent end flaps and adapted to be folded inwardly into substantially the same plane with the end flaps when the blank is folded, thereby constituting closures for the openings occurring at the corners of the box formed by the meeting of each three adjacent sides of the box.

3. The combination with a box blank having two portions adapted to be bent into planes at an angle to each other, and flaps adapted to be folded into substantially a common plane intersecting both of said first-named planes, of a corner-closing flap integrally associated with the blank and adapted to be folded into substantially the same plane with said first-named flaps to constitute a closure for the opening occurring at the corner of the box at the point of intersection of said three planes.

4. The combination with a paper-board box having an opening at the corner formed by the meeting of three adjacent sides of the box, of a flap integral with the blank from which the box is made and hingedly associated with the box adjacent said opening, said flap being inserted through said opening to constitute a closure therefor.

5. The combination with a box blank having relatively wide longitudinal flap-bending creases and transverse marginal flap-forming slots each of which extends completely across the corresponding crease, of a corner-closing flap integral with the box blank and hingedly associated therewith at the inner extremity of each of said slots, said corner-closing flaps serving as closures for the openings occurring at the corners of the box formed by the meeting of each three adjacent sides of the box.

Signed at Chicago, in the county of Cook, and State of Illinois, this 28 day of July A. D. 1914.

FRANK G. FEELEY.

Witnesses:
R. C. GULLEN,
N. F. MORRISSEY.