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J. L. KOLBE

INTERLOCKING JOINT FOR PAPER BOXES

Filed April 19, 1923

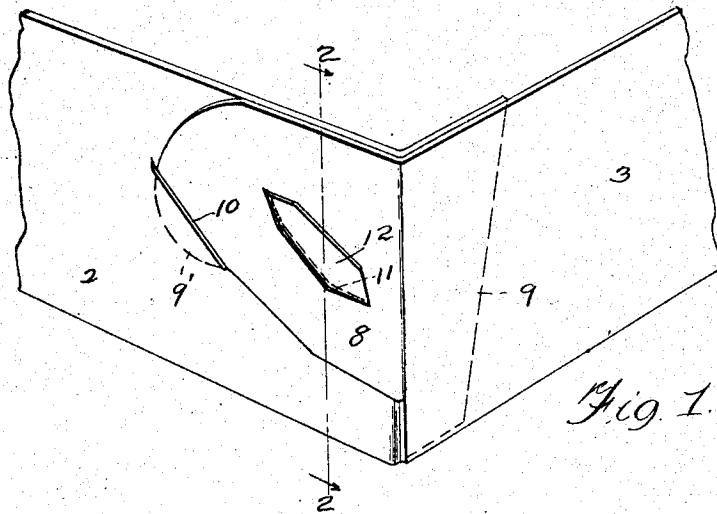


Fig. 1.

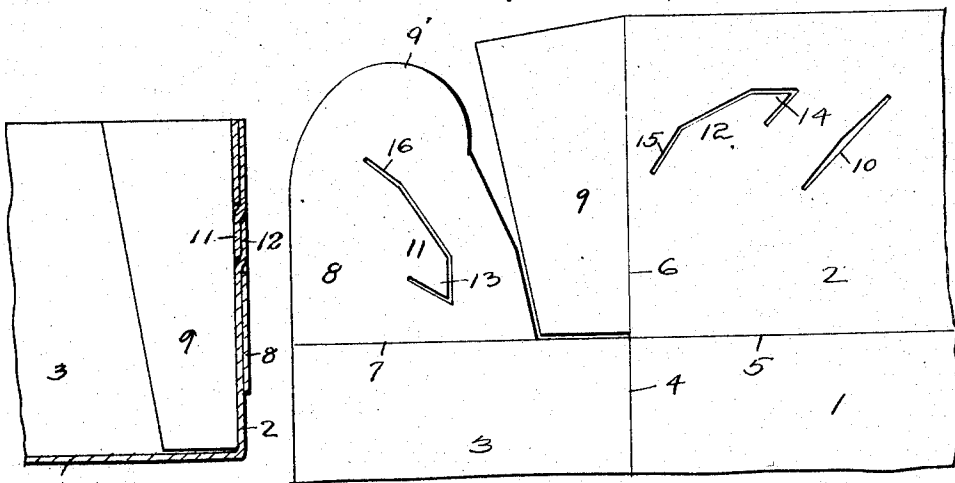


Fig. 2.

Fig. 3.

Inventor  
John L. Kolbe,

By *E. Hume Talbot*

Attorney

# UNITED STATES PATENT OFFICE.

JOHN L. KOLBE, OF WAUWATOSA, WISCONSIN.

INTERLOCKING JOINT FOR PAPER BOXES.

Application filed April 19, 1923. Serial No. 633,265.

*To all whom it may concern:*

Be it known that JOHN L. KOLBE, a citizen of the United States of America, residing at Wauwatosa, in the county of Milwaukee and State of Wisconsin, has invented new and useful Improvements in Interlocking Joints for Paper Boxes, of which the following is a specification.

The object of the invention is to provide an interlocking joint for paper and pasteboard boxes, whereby the folds defining the sides and end walls may be interconnected so as to give strength and durability to the corner in the box structure.

With this object in view the invention consists in a construction and combination of parts of which a preferred embodiment is shown in the accompanying drawings, wherein:—

Figure 1 is a perspective view showing a paper box corner having the interlocking elements constituting the invention connecting the side and end folds.

Figure 2 is a section on the line 2—2 of Figure 1.

Figure 3 is a plan view showing the corner portion of the blank prior to folding.

The invention is designed to have the interlocking elements lie within the boundary lines of the blank from which the bottom 1, the end fold 2 and the side fold 3 are formed, the blank being formed with a crease line 4 defining the side fold and with a crease line 5 defining the end fold, the crease line of the side fold being extended across the end fold as indicated at 6 and the fold line being extended across the side fold as indicated at 7, the stock lying within the area bounded by the corner of the blank and the crease lines 6 and 7 being slit to provide the side and end flaps 8 and 9, of which the latter is foldable on the crease line 6 and the former on the crease line 7, the flap 8 being provided with a rounded nose 9' engageable in a diagonal slit 10 in the end fold and the latter and the flap 8 being respectively provided with oppositely disposed interlocking tongues 11 and 12 each having a triangular extremity designated respectively by 13 and 14 of which the former engages in a diagonal slit 15 defining

one end of the tongue 12 and the latter engages in a corresponding slit 16 defining the rear end of the tongue 11. On the interlocking of the tongues 11 and 12, the triangular or tapered extremities 13 and 14, engaging the slits 15 and 16 effectively secure the side and end folds together to effectively resist any lateral strain on the side fold which perforce means a tensile strain on the flap 8 and the interlocking tongue. Resistance to lateral movement of the flap 8 which would tend to disengage the tongues, is resisted by the engagement of the rounded nose 9 in a slit 10.

On the engagement of the flap 8 with the end fold 2 by the interconnection of the tongues and nose 9 with the slit 10, the flap 9 has been folded into a position of perpendicularity with the end fold, the said flap 9 lies against the inner face of the side fold 3 at the corner and the latter is thereby reinforced, having the double thickness of the stock at its point.

It will be noted that the shape of the flaps 8 and 9 is such that they can be formed from the stock left in the corner of the blank between the outer boundary line of the same and the crease lines 6 and 7, thus making it unnecessary to provide an irregular form of blank, the latter being susceptible of being struck with a square or rectangular die depending on the shape of the box desired.

Having described the invention, what is claimed as new and useful is:—

A box corner reinforcing comprising in combination with the folds defining adjacent sides of the paper box, a flap having a crease line connection with one of said folds and lying in contact with the outer face of the other of said folds, the last said fold being formed with a diagonal slit and said flap having a rounded nose to engage in said slit, the last said fold and the flap being respectively provided with oppositely disposed interlocking tongues and slits, the tongues having tapered or angular noses engageable respectively with diagonal slits defining the rear edge of the opposite tongue.

In testimony whereof he affixes his signature.

JOHN L. KOLBE.