No. 731,924.

PATENTED JUNE 23, 1903.

H. LOWY.

FOLDABLE PAPER BOX.

APPLICATION FILED MAR. 7, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

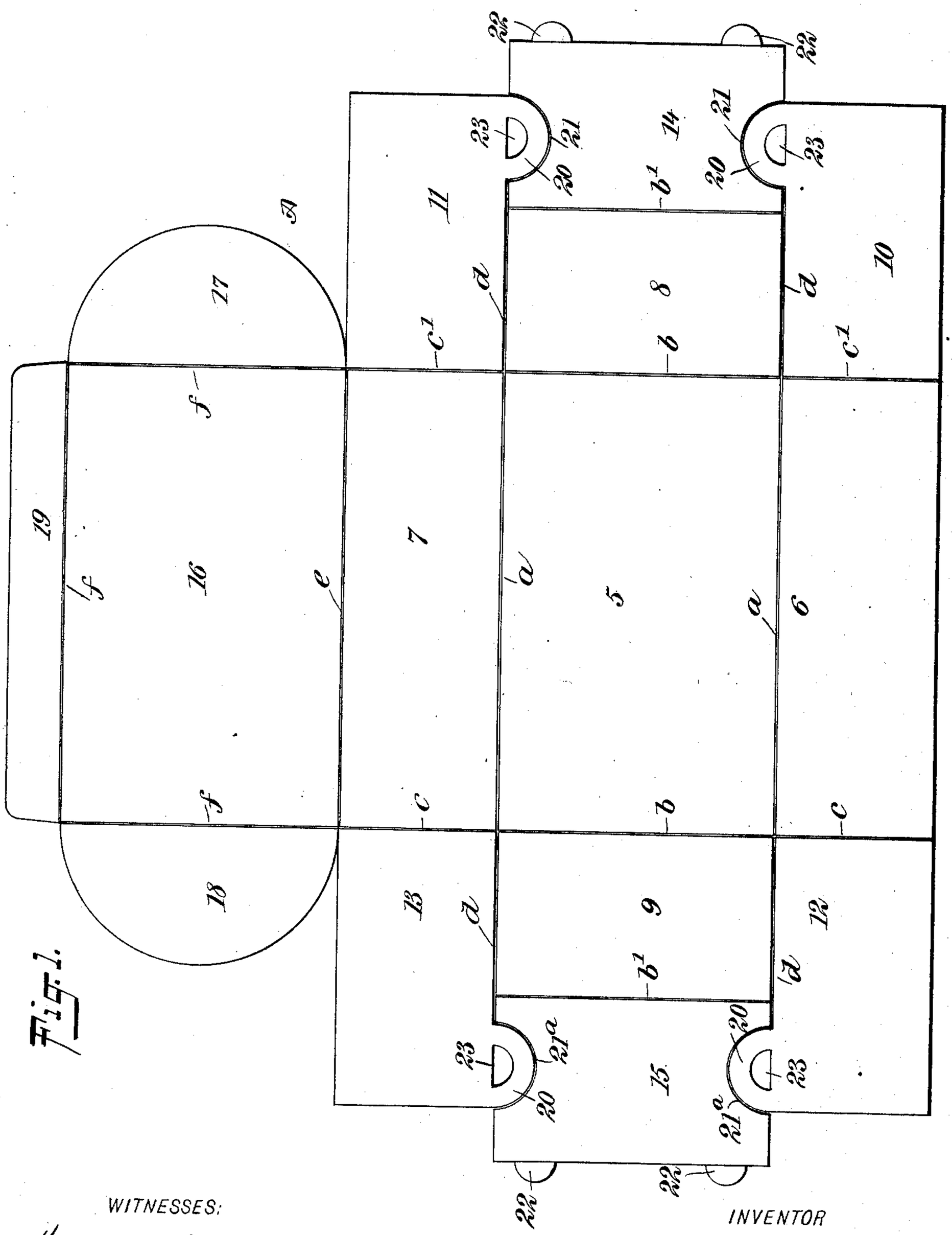

Fig. 1.

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2.

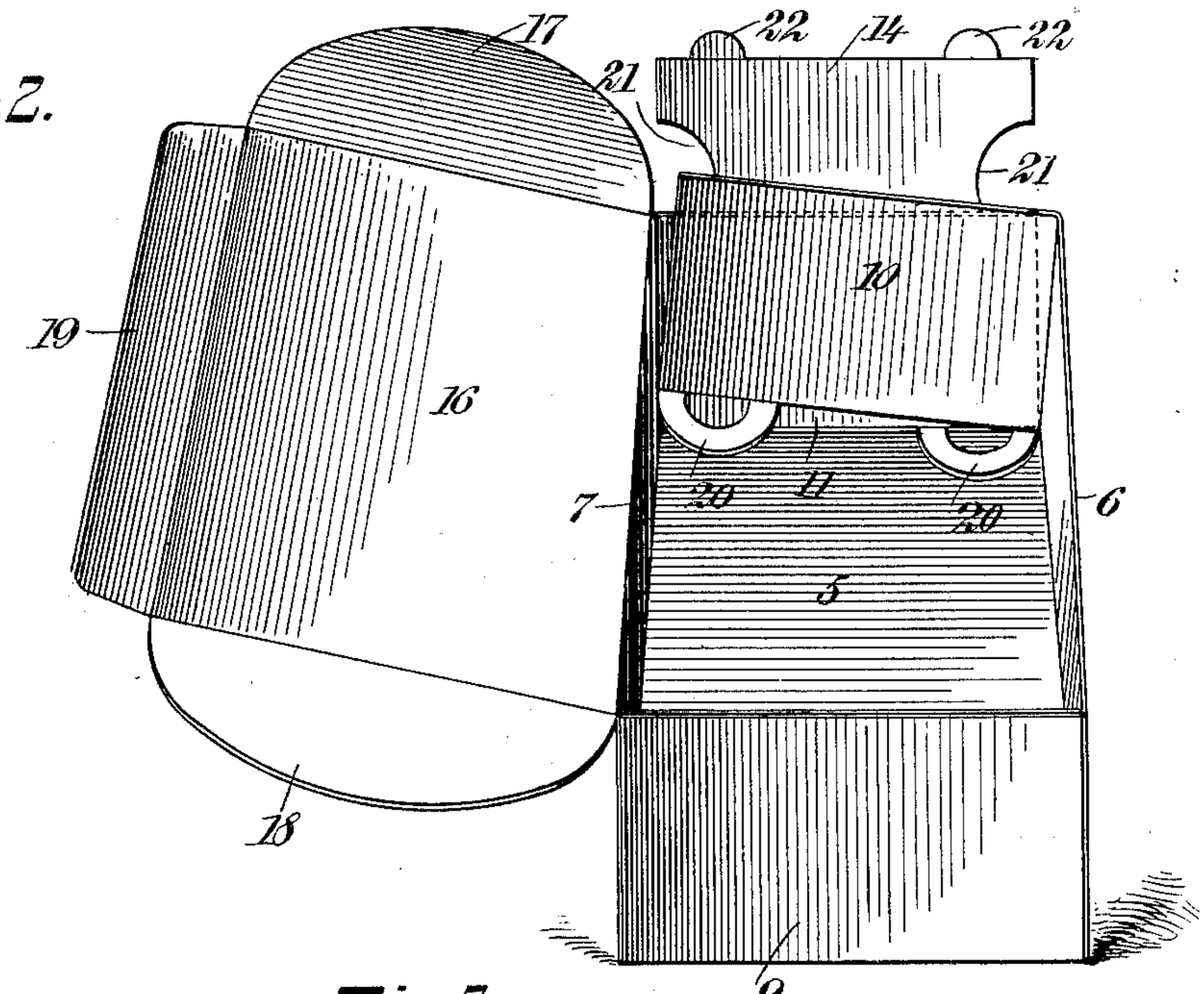


Fig. 3.

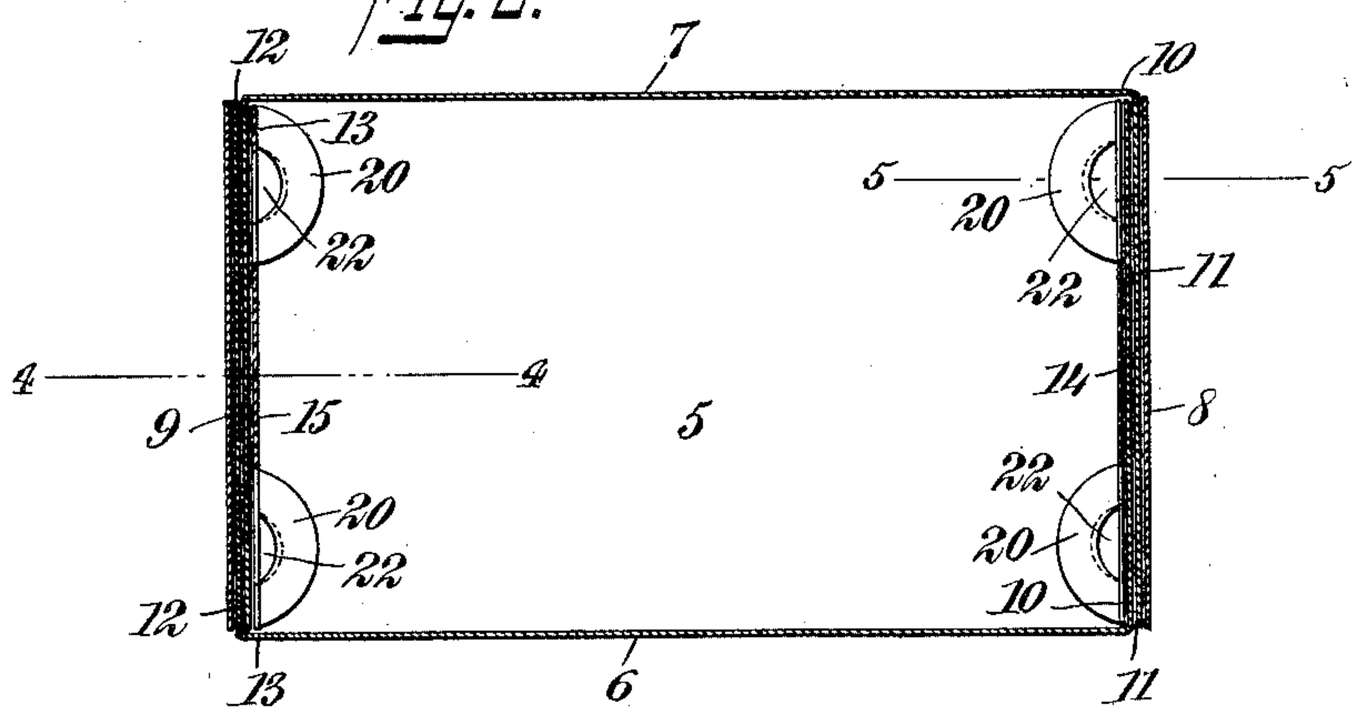


Fig. 4.

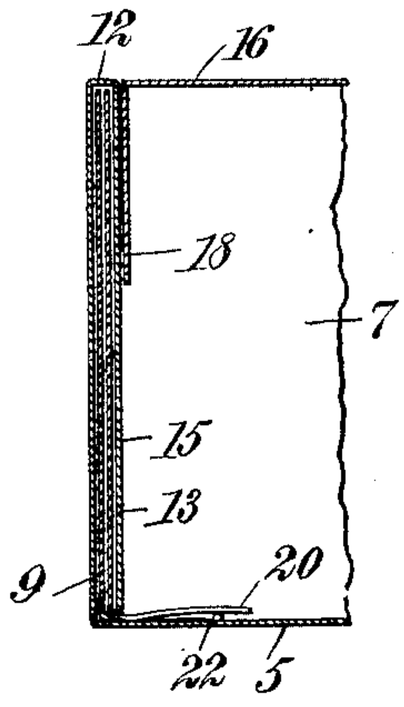
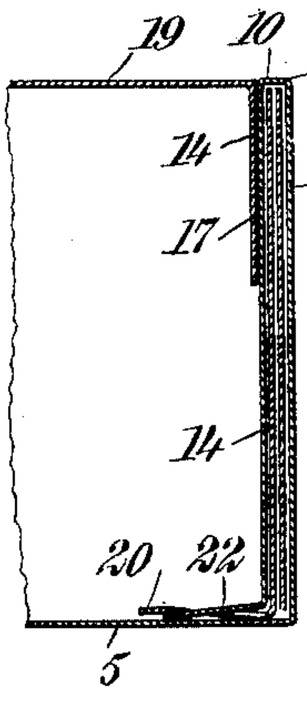


Fig. 5.



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UNITED STATES PATENT OFFICE.

HENRY LOWY, OF NEW YORK, N. Y.

FOLDABLE PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 731,924, dated June 23, 1903.

Application filed March 7, 1903. Serial No. 146,633. (No model.)

To all whom it may concern:

Be it known that I, HENRY LOWY, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented new and useful Improvements in Foldable Paper Boxes, of which the following is a full, clear, and exact description.

This invention relates to improvements in foldable paper boxes of that class which are made by cutting or stamping them each in a single piece from a sheet of paper-stock or other suitable material.

The object that I have in view in this invention is to rapidly and economically produce an improved box-blank which is of such form that it can be bent or folded easily to complete the box and have its parts so arranged and interlocked that the use of paste or other mucilaginous material is wholly obviated.

The improved box-blank of my invention can be stamped or cut without waste of the paper-stock, and the box resulting from the bending of said blank is held together solely by the engagement and interlocking of its parts.

Further objects and advantages of the invention will appear in the course of the subjoined description, and the novelty will be defined by the annexed claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of a box-blank made in accordance with my invention. Fig. 2 is a perspective view of the box in its partially-folded condition, showing the manner of arranging the interlocking parts. Fig. 3 is a horizontal section taken through the box in its folded condition. Figs. 4 and 5 are vertical transverse sections taken in the planes indicated by the dotted lines 4 4 and 5 5, respectively, of Fig. 3.

The box-blank A is cut, stamped, or otherwise produced in a single piece from a sheet of paper-stock or equivalent material, said blank being cut and scored at one operation in the shape shown by Fig. 1. The blank consists of a body portion 5, side folds 6 7, end folds 8 9, flaps 10 11 12 13, integral with the side folds 6 7, and end flaps 14 15, integral with the end folds 8 9, respectively. In certain classes of paper boxes I provide the side folds 7 with a top 16, having flaps 17 18 and a tongue 19; but it will be understood that in other styles of boxes the top, with its flaps and tongue, is omitted. The blank is creased or scored along the side and end portions thereof at *a b* to define the limits of the side and end folds. Each side fold is creased or scored at *c c'* to facilitate the folding of the flaps 10 11 12 13, and these flaps are separated from the end folds and the end flaps by slits or cuts *d*. The top 16 when used as a part of the box-blank is creased at *e* to define its limit with respect to one side fold 7, and said top is also creased at *f* to facilitate the folding of its flaps 17 18 and the tongue 19. This tongue 19 of the top extends lengthwise thereof and beyond its free edge, said top, the tongue 19, and the side folds 6 7 being equal in length to the body or middle portion 5 of the box-blank.

One of the characteristic features of my invention consists in the provision of tongues 20 on the side flaps 10 11 12 13. The tongues 20 on the side flaps 10 11 are formed during the operation of cutting or stamping the paper blank A in a way to produce recesses 21 in the side edges of the end flap 14, while the tongues 20 of the other pair of side flaps 12 13 are cut out of the side edges of the end flap 15, thus forming recesses 21^a in said end flap. The end flaps 14 15 are provided at their outer free edges with lips 22, which are integral with said flaps and are adapted to be folded into interlocking engagement with the tongues 20, the latter having suitable apertures 23 punched or cut therein. The tongues 20 on the side flaps are cut from the material comprising the end flaps 14 15, thus enabling me to produce the box-blank with an exceedingly small amount of waste of the stock or material.

The box-blank herein shown and described can be easily and quickly bent into shape to produce a complete box, and the several parts of said box are adapted to be assembled and interlocked in a way to hold them firmly in place without resorting to the use of paste, glue, or other mucilaginous material. The side folds 6 7 are first bent upwardly along the score-lines *a*, and the flaps 10 11 12 13 are

then bent along the score-lines *c c'*, so as to extend inwardly and overlap in pairs, the flaps 10 11 at one end of the blank constituting one pair of overlapping flaps, while the other flaps 12 13 at the opposite end of the box constitute the other pair of overlapping flaps. The tongues 20 on the flaps 10 12 extend inwardly therefrom and rest on the body 5, while the corresponding tongues 20 on the flaps 11 13 fit beneath the lower edges of the flaps 10 12 and also rest on the body 5, the positions of the tongues formed by the respective pairs of flaps being indicated by Figs. 2 to 4, inclusive. After the flaps on the side folds shall have been properly assembled the end folds 8 9 are bent on the crease-lines *b* and the end flaps 14 15 are bent on the crease-lines *b'*, so as to extend over the respective pairs of flaps 10 11 12 13, after which the lips 22 are manipulated to make them fit into the apertures 23 of the inwardly-extending tongues 20. The engagement of the lips 22 with the perforated tongues on the respective pairs of flaps 10 11 12 13 interlocks the several parts of the box in a way to hold them against relative movement or displacement, and the box will hold or retain its shape without the employment of separate fastening means.

It is evident that the top 16 when it is used may be folded over the upper portion of the box and that the flaps 17 18, along with the tongue 19, may be tucked into said top of the box for the purpose of holding itself in place, the flaps of said top preventing the escape of material from the box, while the tongue 19 operates primarily as a means for holding the top in place against accidental movement.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A box-blank having a body portion, side and end folds, and side and end flaps; each end flap having at its outer edge a series of lips; the side flaps being each of less length than the aggregate length of one end fold and end flap, and each side flap having a perforated tongue cut from a side edge of one end flap.

2. A box having a body portion, side folds and flaps, and end folds and flaps; the side flaps having tongues which are cut out of the stock of the end flaps and are arranged to rest on the body portion; the end flaps being folded over the side flaps and provided with lips which interlock said tongues.

3. A box having a body portion, side folds, side flaps each having tongues, end flaps, and end flaps provided with lips; the tongue of one side flap fitting beneath a companion side flap, and said lips having interlocking engagement individually with the tongues.

4. A box having the sides thereof provided with inwardly-foldable flaps formed with perforated tongues arranged to lie inside of the box, and ends having flaps which are foldable over the side flaps and are provided with projections to interlock with said perforated tongues.

5. A box having sides provided with inwardly-foldable flaps disposed in lapping relation, said flaps having tongues extending into said box, one of said tongues lying below one of the flaps, and end folds having flaps foldable over the lapping side flaps, said end flaps having interlocking engagement with the tongues of the side flaps.

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

HENRY LOWY.

Witnesses:
MORRIS HIRSCH,
H. T. BERNHERD.