

No. 756,311.

PATENTED APR. 5, 1904.

F. R. ADAMS.  
COLLAPSIBLE PAPER BOX.  
APPLICATION FILED AUG. 20, 1902.

NO MODEL.

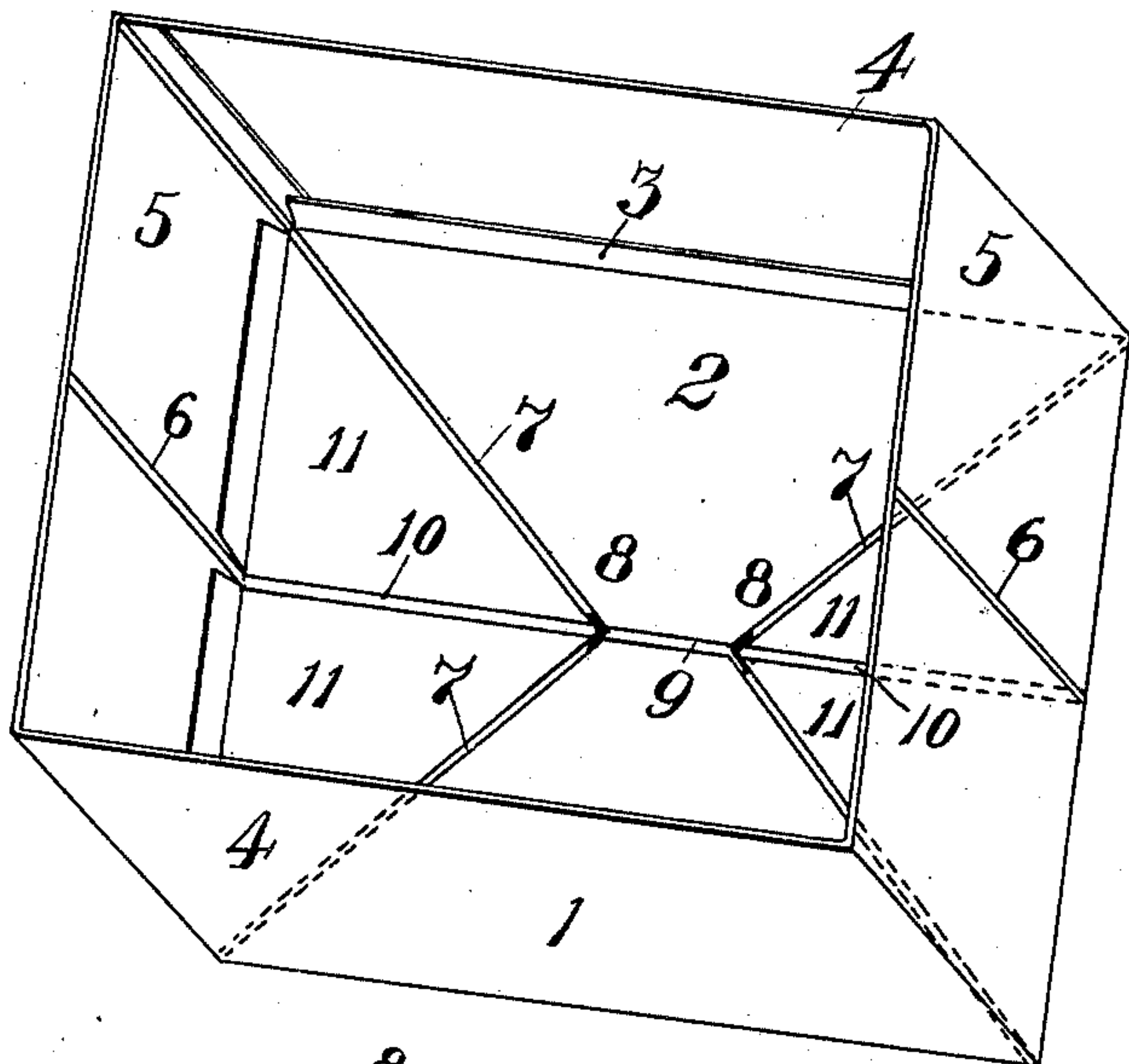


Fig. 1.

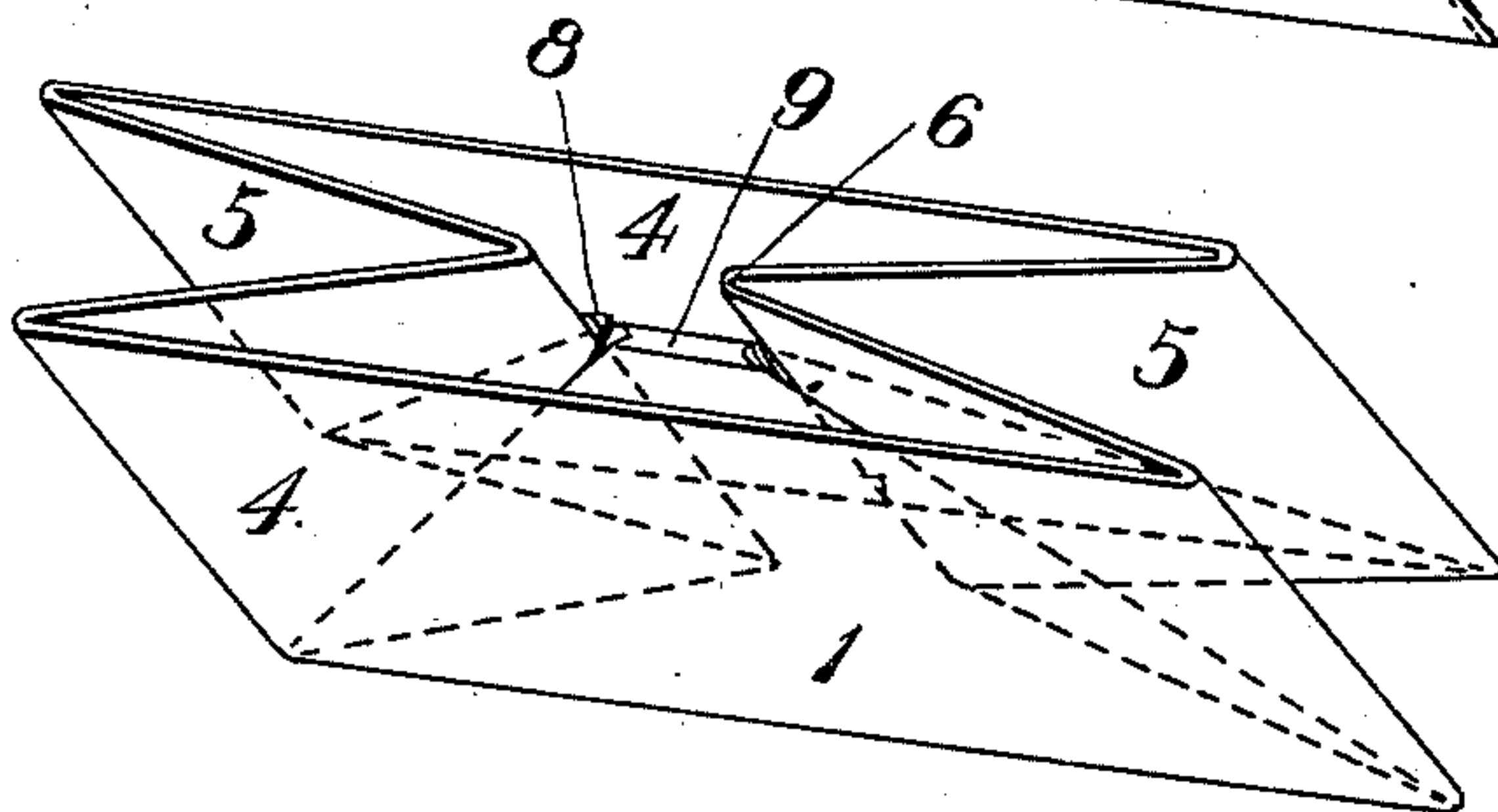


Fig. 2.

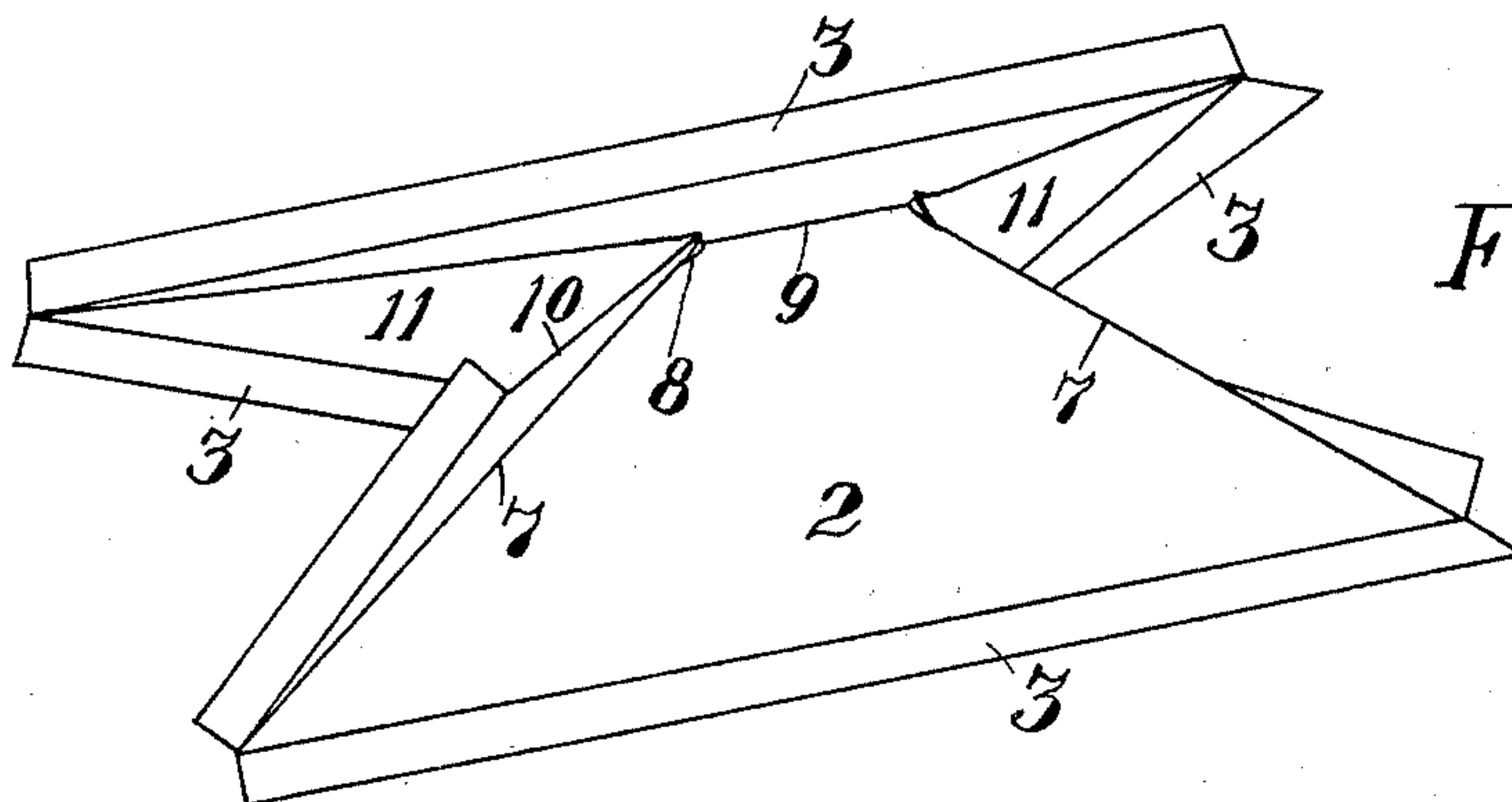


Fig. 3.

WITNESSES:

*Beart Shum-Sarou.*  
*Bessie Gorfinkel.*

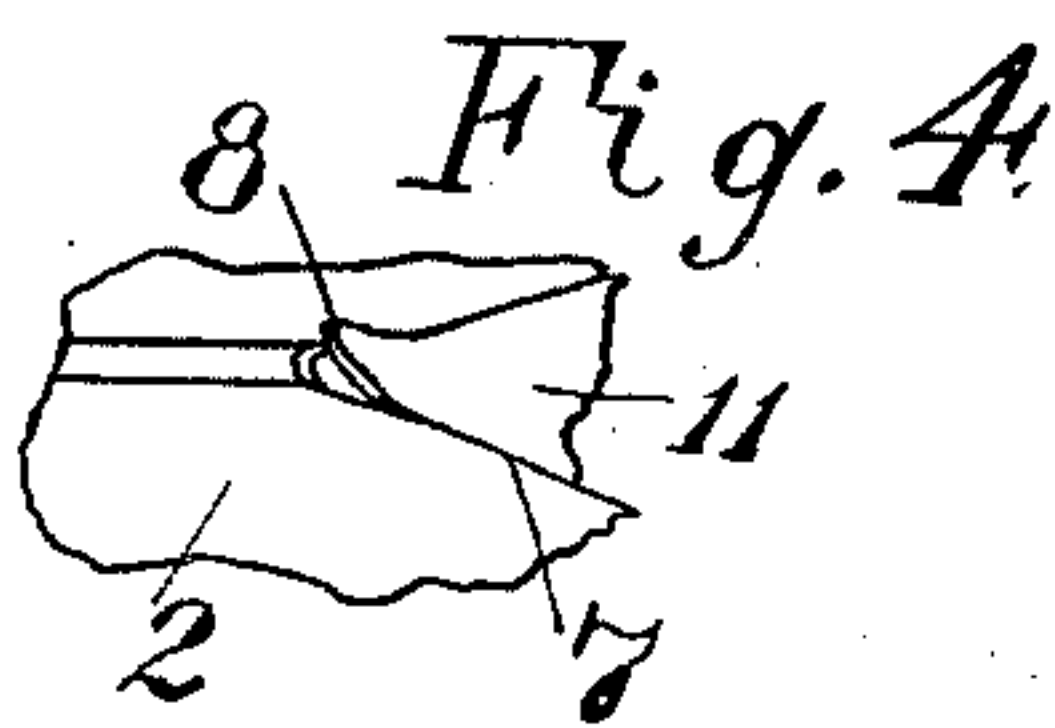


Fig. 4.

INVENTOR.

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# UNITED STATES PATENT OFFICE.

FREDERICK R. ADAMS, OF SAN FRANCISCO, CALIFORNIA.

## COLLAPSIBLE PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 756,311, dated April 5, 1904.

Application filed August 20, 1902. Serial No. 120,278. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK R. ADAMS, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Collapsible Paper Boxes, of which the following is a specification.

My invention relates to improvements in collapsible paper boxes, the object of my invention being to provide a paper box having the bottom made of a single piece secured on all four sides to the four lower edges of the sides of the box and which can be collapsed or expanded, as desired.

In prior forms of collapsible boxes, so far as I am aware, it has been the practice to secure the bottom to the sides of the box loosely or detachably to a greater or less extent, and these detachable parts have been tied together or otherwise secured in place when the box has been opened to its full extent. In other forms of collapsible boxes the bottom has been made in two or more pieces separate from each other. In no instance, so far as I am aware, has the bottom been made of a single piece fixedly secured around all of its edges to the sides of the box, while permitting the box to be collapsed. The object of my invention is to provide a box which will enable this to be done.

My invention therefore resides in the novel construction, combination, and arrangement of parts for the above ends hereinafter fully specified, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved paper box expanded for use. Fig. 2 is a similar view of the box collapsed. Fig. 3 is a similar enlarged view of the bottom of the box detached and folded. Fig. 4 is a similar further-enlarged view showing the cut in the bottom of the box at the apex between converging creases.

Referring to the drawings, 1 represents the body of the box, which comprises four rectangular sides, and 2 represents the bottom of the box. Said bottom is secured to the sides of the body by means of flanges 3, bent upwardly from said bottom and secured on the inner sides of the lower edges of the body of the box, as clearly shown in Fig. 1. Of the

sides of the box two opposite sides 4 are longer than the other two opposite sides 5, and in collapsing the box the longer sides 4 move with a parallel movement toward each other, while the shorter sides 5 are collapsed by being folded along vertical creases 6 in the middle of said shorter sides.

At the same time that the sides are collapsed in the above manner the bottom 2 of the box is also collapsed in the following manner: Oblique creases 7 are formed, as shown, by scoring the bottom of the box, the two oblique creases 7, which run from one of the shorter ends 5, converging to a point 8 on the near side of the center of the bottom of the box, while the other oblique creases 7 from the other short end converge to a point 8, similarly situated with respect to said other short end. Between these two points 8 is formed a crease 9, and from said points 8 to the lower ends of the creases 6 are also formed creases 10. All of these creases are formed by scoring the bottom and body of the box, so as to facilitate bending or folding along the creases.

The bottom of the box having been suitably prepared in the above manner, when the bottom is collapsed it is folded from the corners inward along the oblique creases 7, the crease 9 in the middle rising and the sides of the bottom folding down from said crease 9, while at the same time the triangular portions 11 at the ends of the bottom fold inwardly and upwardly along the creases 10.

At the points 8, which form the apices of the oblique folds 7 and which are the juncture of the creases 9 and 10, are formed cuts in the bottom of the box. The preferred form of these cuts is that of an angular slit, as shown; but the cut may also be in the form of a round or otherwise shaped hole. It will have been understood that the folds on the creases 9 and 10, which are in line with each other, are in the reverse direction. There is therefore a tendency for the folding along the two creases to interfere with each other at the point where they join or for one crease to run into the other. This tendency is prevented by making the cut at the point 8 of the juncture, this cut preventing extension of either crease beyond its own limit.

It will be understood that the bottom may be attached to the sides of the box by means of flanges extending from said sides instead of flanges extending from the bottom, as shown, 5 and various other changes and modifications may be made in the construction of said box without departing from the spirit of my invention.

I claim—

- 10 1. A box comprising rectangular sides in combination with a bottom secured to said sides and folding along creases extending obliquely from the corners of the bottom toward the middle portion of the bottom and also fold- 15 ing downward or outward from a central longitudinal crease and upward or inward from terminal longitudinal creases in line with the central crease, said bottom being provided

with means for preventing said central and terminal creases spreading into each other, 20 substantially as described.

2. A collapsible box comprising a portion folded on two creases in line with each other, and outward or downward from one crease and upward or inward from the other crease, said 25 portion having a cut between and separating the two creases to prevent one crease spreading into the other, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two subscribing wit- 30 nesses.

F. R. ADAMS.

Witnesses:

FRANCIS M. WRIGHT,  
BESSIE GORFINKEL.