

No. 696,928.

Patented Apr. 8, 1902.

E. C. BEECHER.
FOLDING HAT BOX.

(Application filed Aug. 23, 1901.)

(No Model.)

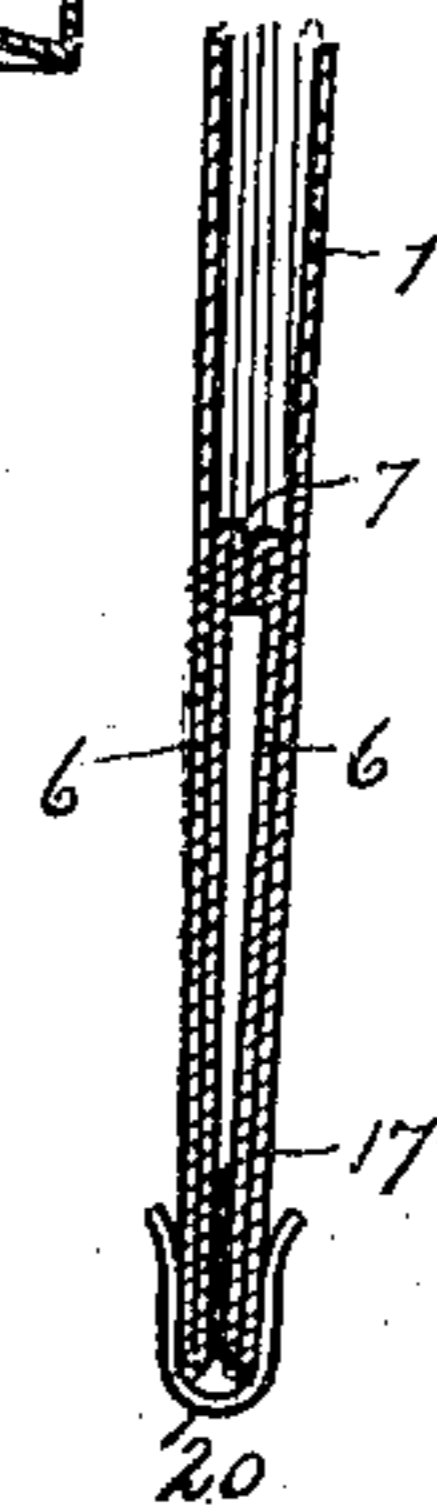
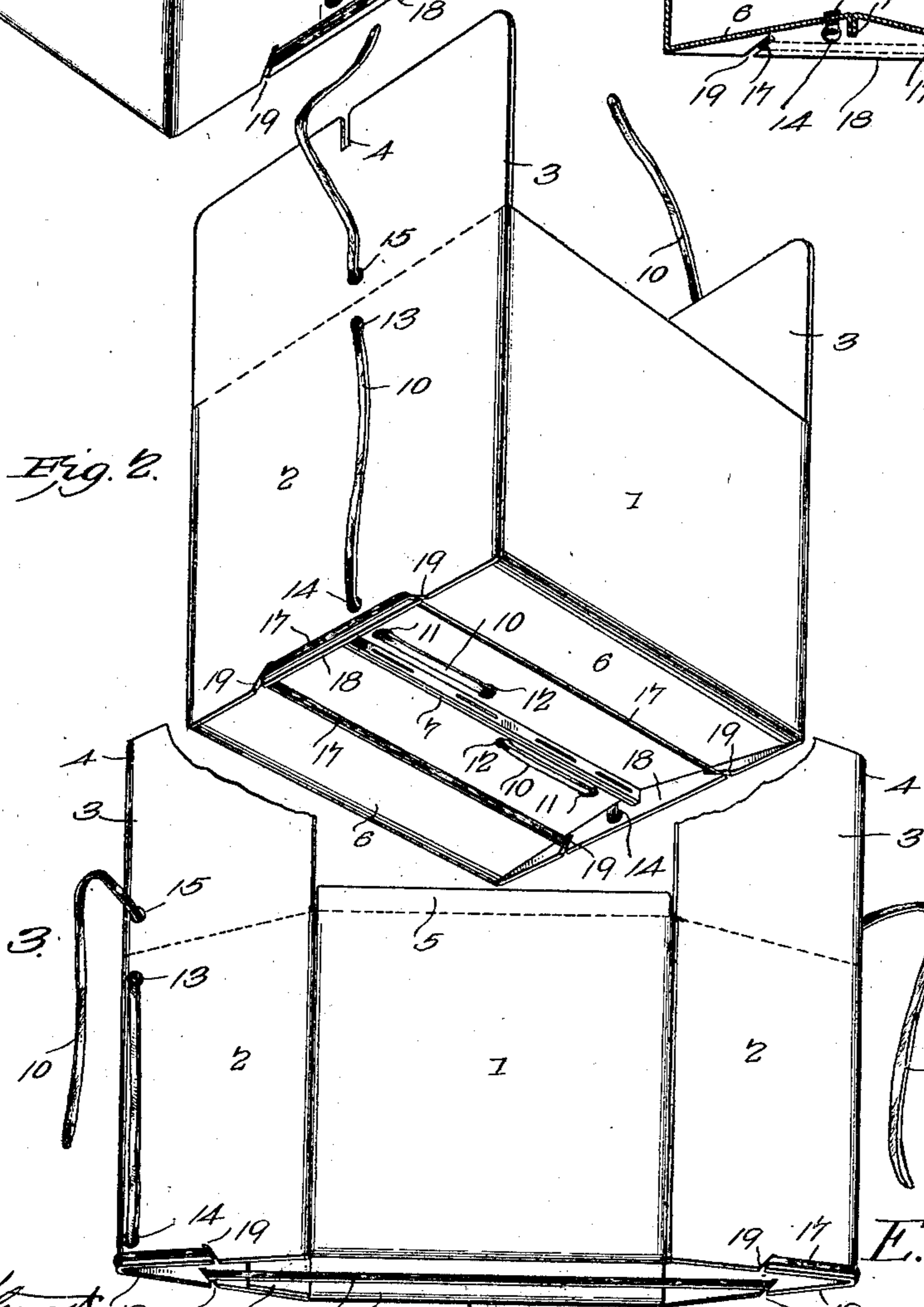
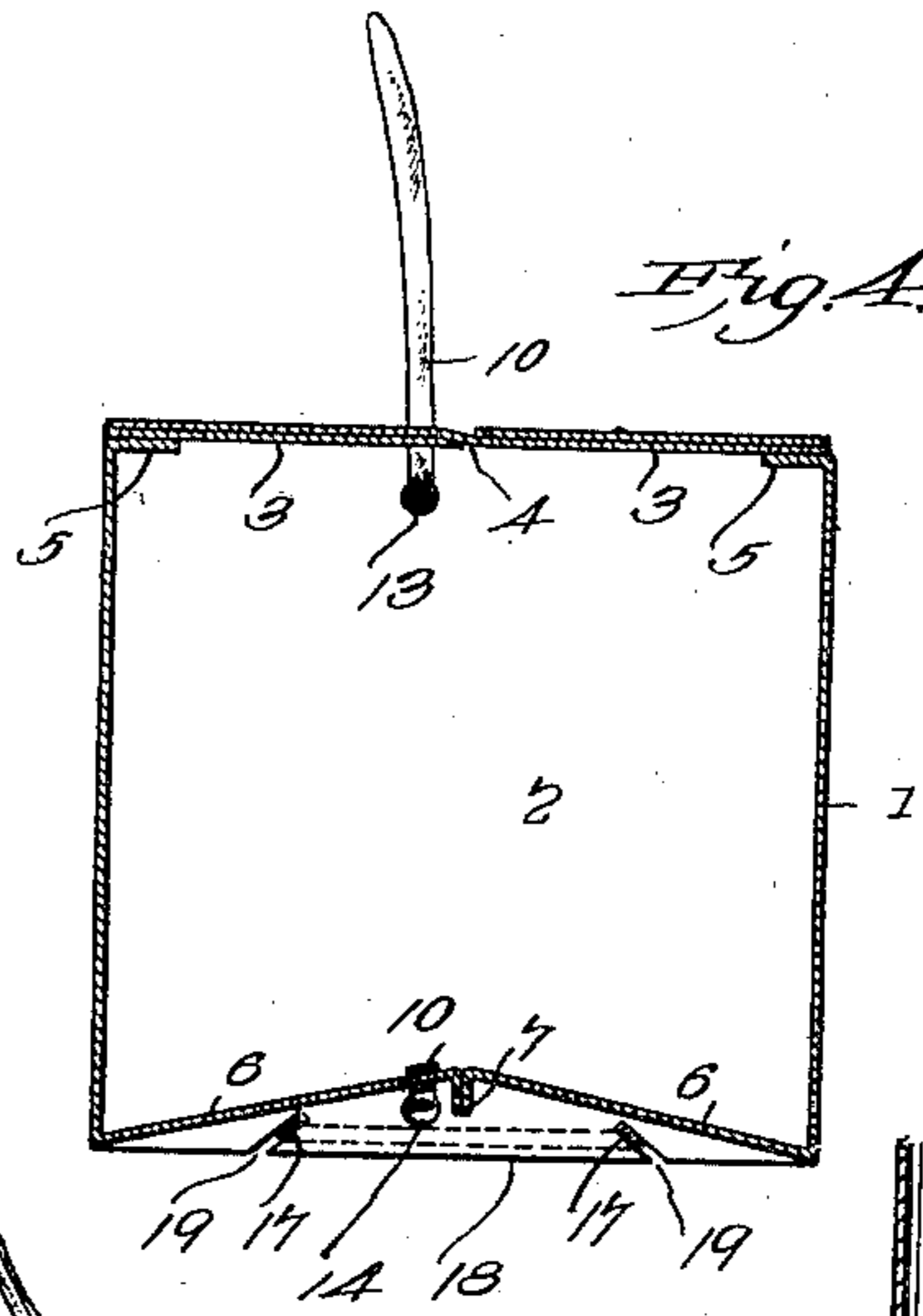
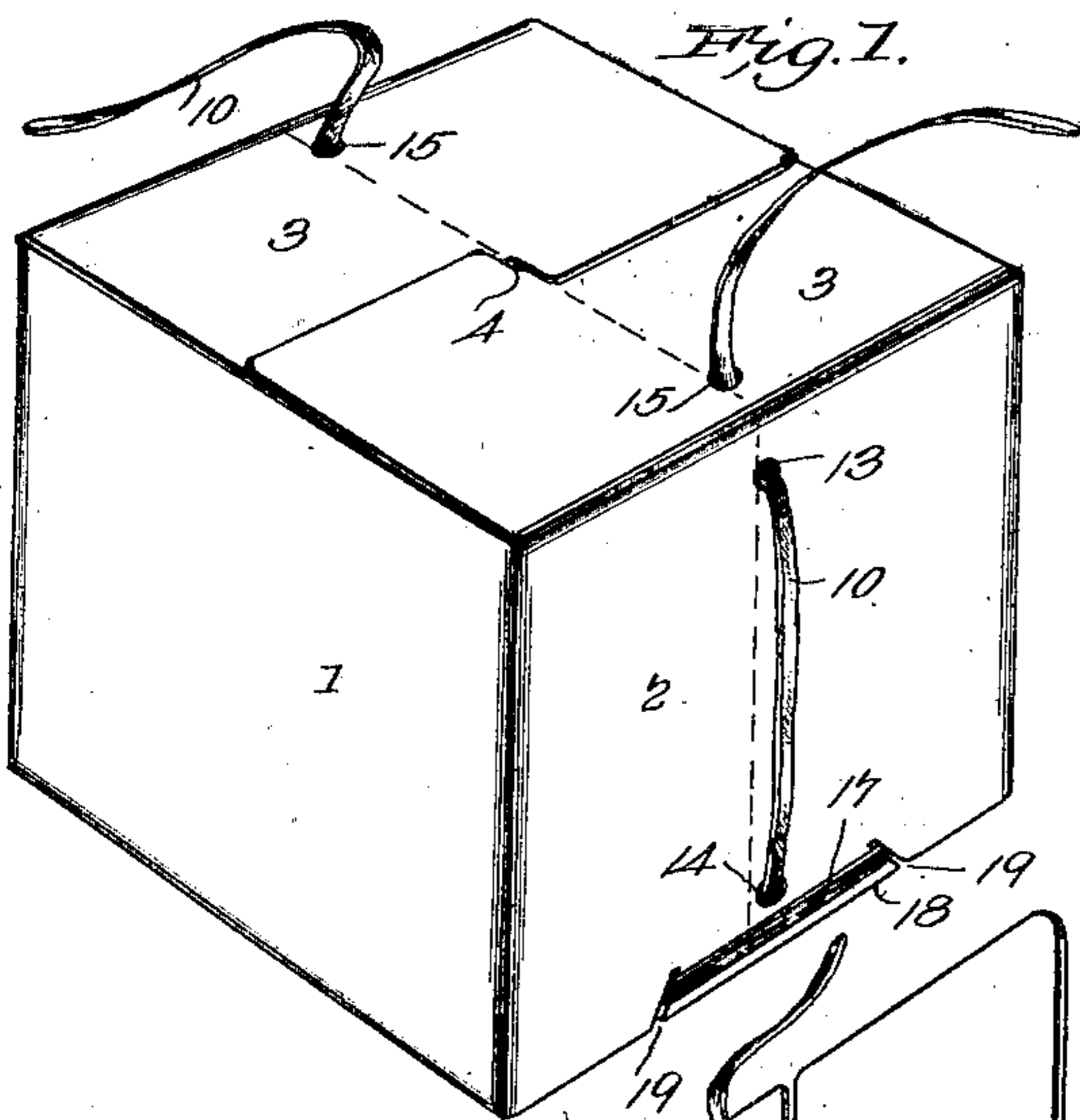
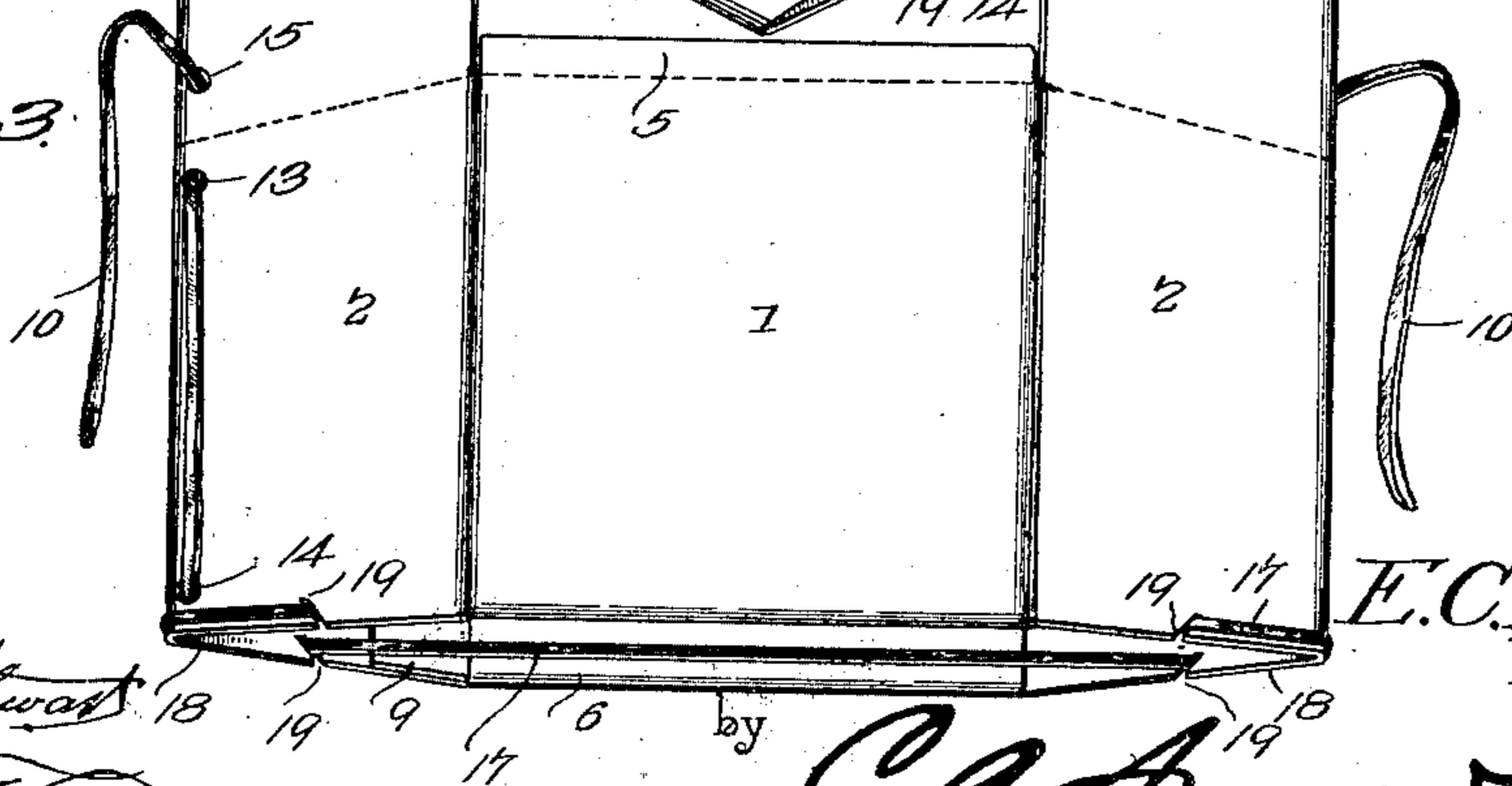


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

ELMER C. BEECHER, OF EAST NORWALK, OHIO.

FOLDING HAT-BOX.

SPECIFICATION forming part of Letters Patent No. 696,928, dated April 8, 1902.

Application filed August 23, 1901. Serial No. 73,054. (No model.)

To all whom it may concern:

Be it known that I, ELMER C. BEECHER, a citizen of the United States, residing at East Norwalk, in the county of Huron and State of Ohio, have invented a new and useful Folding Hat-Box, of which the following is a specification.

The invention relates to improvements in folding hat-boxes.

10 The object of the present invention is to improve the construction of hat-boxes and to provide a folding one which will be simple and inexpensive in construction and which will be capable of automatically unfolding when it is released, whereby it may be compactly arranged for storing and quickly set up for use.

15 The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

20 In the drawings, Figure 1 is a perspective view of a folding hat-box constructed in accordance with this invention and shown closed, the tape or string being untied to illustrate the manner of interlocking the top flaps which form the cover. Fig. 2 is a similar view, the top flaps being open. Fig. 3 is a perspective view illustrating the manner of folding the parts, the sides being slightly separated to illustrate the arrangement of the elastic band which automatically opens or unfolds the box. Fig. 4 is a vertical sectional view, the parts being arranged as shown in Fig. 1. Fig. 5 is a detail view illustrating the manner of securing the box in its folded condition.

25 Like numerals of reference designate corresponding parts in all the figures of the drawings.

30 1 and 2 designate the sides of the box, and these sides, which are hinged at the corners of the box, are adapted to fold from the position shown in Fig. 2 to that illustrated in Fig. 3, the sides 2 being provided with central vertical creases on which the same fold. The sides 2 are doubled in folding and are provided with top flaps 3, which fold in a similar manner and which are adapted to form the cover of the box. In folding the box the top flaps are raised to the position shown in Fig.

2 to form continuations of the adjacent sides 2, and they are centrally creased with the sides 2 to fold as shown in Fig. 3. The top flaps when closed to form a cover, as illustrated in Figs. 1 and 4, overlap and are interlocked, the overlapping portions being provided with slots or notches 4 and being preferably beveled or cut away at the outer ends thereof to form flaring entrances to the slots or notches. The slots or notches form shoulders which hold the top flaps against lateral movement and assist in supporting the box when the same is closed.

35 The sides 1 are provided at their upper edges with narrow flanges or extensions 5, which are adapted to be folded inward to receive the top flaps 3, as clearly illustrated in Fig. 4 of the accompanying drawings. The said sides 1 are also provided with integral bottom flaps or sections 6, which are united at their adjacent edges 7 and which form a folding bottom, the bottom sections being hinged at their adjacent edges 7 and at their outer edges or portions to the sides 1. When the sides are collapsed, as illustrated in Fig. 3, the bottom folds inward between the sides 1. The box is preferably constructed of a single piece of paper or other material, and one of the sides 1 is provided with an integral strip or flange 9, which is pasted or otherwise secured to the inner face of the adjacent side 2, but it may be secured in any other suitable manner, and the edges 7 of the bottom sections are preferably fastened by wire staples.

40 When the box is arranged as illustrated in Fig. 1, it is adapted to be secured by means of a continuous tape or string 10, passing through perforations 11 and 12 of the bottom sections and through upper and lower perforations 13 and 14 of the sides 2 and through perforations 15 of the top flaps. The perforations 11 and 12 of the bottom sections 6 are arranged at the ends of the sections and at points adjacent to the center of the bottom. The lower perforations 14 of the sides 2 are arranged near the lower edges of the said sides, and when the tape or string is drawn taut the bottom is firmly secured to the sides 2 and is supported by the tape or string. The tape or string is arranged on the exterior of the sides 2 and extends inward at the upper perforations 13 and outward through the top

perforations 15. The ends of the tape or string are adapted to be tied at the center of the top of the box, as will be readily understood, and when so secured the box is firmly supported and is securely held in such position.

In order to automatically unfold the boxes and arrange them for use, an elastic band 17 of rubber or other suitable material is employed, and this elastic band 17 is stretched across the lower face of the bottom of the box and is connected with the sides 2 and is adapted to be distended by the same when the box is folded, whereby when the box is released the rubber will return the parts of the box to their position before folding. The sides 2 are provided at opposite sides of the center of their lower edges with inclined cuts or notches, forming intermediate tapered portions 18, which prevent the elastic band from slipping out of engagement with the sides. The notches or cuts 19 converge upwardly, and the sides 1 are designed to be engaged by a suitable clip 20 for holding the box in its folded position. The clip 20, which is illustrated in Fig. 5 of the drawings, consists of a piece of resilient wire or other material bent into approximately U shape to form two sides or jaws for engaging the hat-box. When the hat-boxes are folded, they may be compactly arranged, and when it is desired to use a box the clip is removed and the elastic band will automatically draw the doubled or folded sides 2 inward from the position illustrated in Fig. 3 to that shown in Fig. 2, and this movement expands the sides 1 and unfolds the bottom.

It will be seen that the box is simple and comparatively inexpensive in construction, that it is capable of compactly folding and of automatically unfolding, and that the tape or string which holds the box closed supports the bottom and stiffens the adjacent sides. It will also be apparent that the box, although more particularly designed for use as a hat-box, is adapted for a variety of other purposes.

What I claim is—

1. A folding box comprising the sides 1 and 2 hinged together at the corners of the box, the sides 2 being creased between the sides 1 and arranged to fold outward away from each other, whereby they are adapted to distend and place under tension an elastic connection, substantially as and for the purpose described.

2. A folding box comprising the sides 1 and 2 hinged together at the corners of the box, the sides 2 being creased between the sides 1 and arranged to fold outward from each other, whereby they are adapted to distend a flexible connection, a folding bottom, and the folding top flaps hinged to the upper edges of the

sides 2 and arranged to swing downward over the box, said top flaps being creased between their side edges, whereby they are adapted to fold with the sides 2, substantially as described.

3. A folding box comprising the sides 1 and 2 hinged together at the corners of the box, the sides 2 being creased between the sides 1 and arranged to fold outward from each other, whereby they are adapted to distend an elastic connection, the folding top flaps hinged to the upper edges of the sides 2 and creased between their side edges to enable them to fold outward with the said sides 2, the folding bottom flaps hinged to the sides 1, and the continuous tape laced through the sides 2, the top flaps and the bottom flaps and adapted to be tied, substantially as and for the purpose described.

4. A folding box composed of sides hinged together at their adjacent edges, two of the sides being arranged to project outwardly from each other in folding, a folding bottom, an elastic connection arranged to be distended and placed under tension by the outwardly-projecting sides when the box is folded, whereby the said box, when released, will be automatically unfolded, and means for holding the box folded, substantially as described.

5. The combination of a folding box having sides 1 and 2 hinged together at the corners of the box, the sides 2 being creased between the sides 1 and arranged to fold outward, an elastic connection extending across the box and attached to the same adjacent to the said creases, whereby it is distended and placed under tension when the box is folded, and is capable of automatically unfolding the box when the parts of the latter are free to move, and a locking device for holding the box folded, substantially as described.

6. A folding box provided with sides arranged to fold outwardly away from each other and having notches, and an elastic band held within the notches and connecting the sides and arranged to be distended and placed under tension when the box is folded, substantially as and for the purpose described.

7. A folding box comprising the sides 1, the sides 2 hinged to the sides 1 and provided at their lower edges with notches, the folding bottom hinged to the sides 1, the top flaps, an elastic band arranged in the said notches and connecting the sides 2, and means for holding the box in its closed position, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ELMER C. BEECHER.

Witnesses:

IRA T. CONKLIN,
MARY I. BEECHER.