No. 895,564. PATENTED AUG. 11, 1908.

F. H. HOUGLAND.

FOLDING BOX.

APPLICATION FILED FEB. 17, 1908.

2 SHEETS—SHEET 1.

Fig. 1.

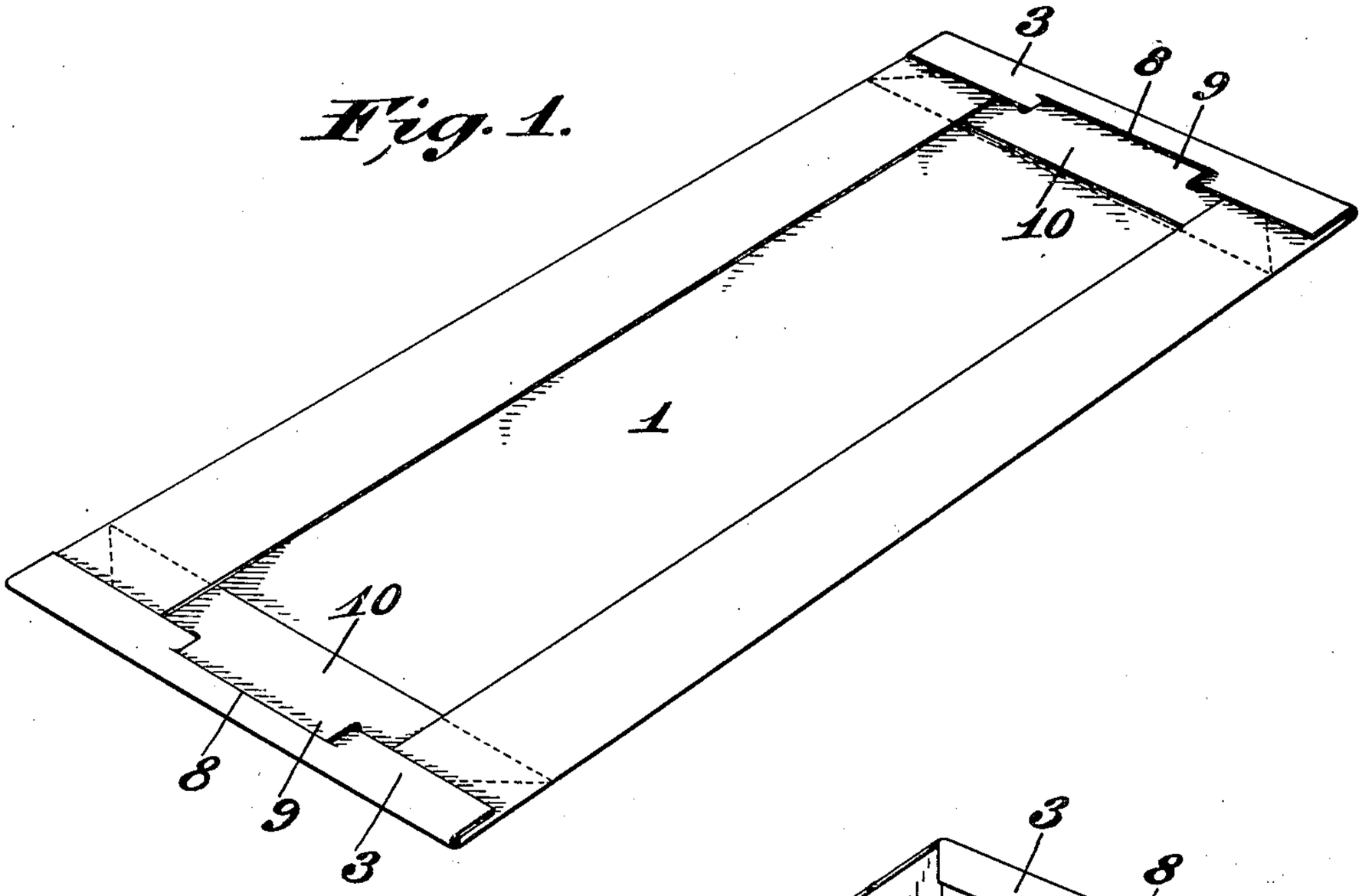
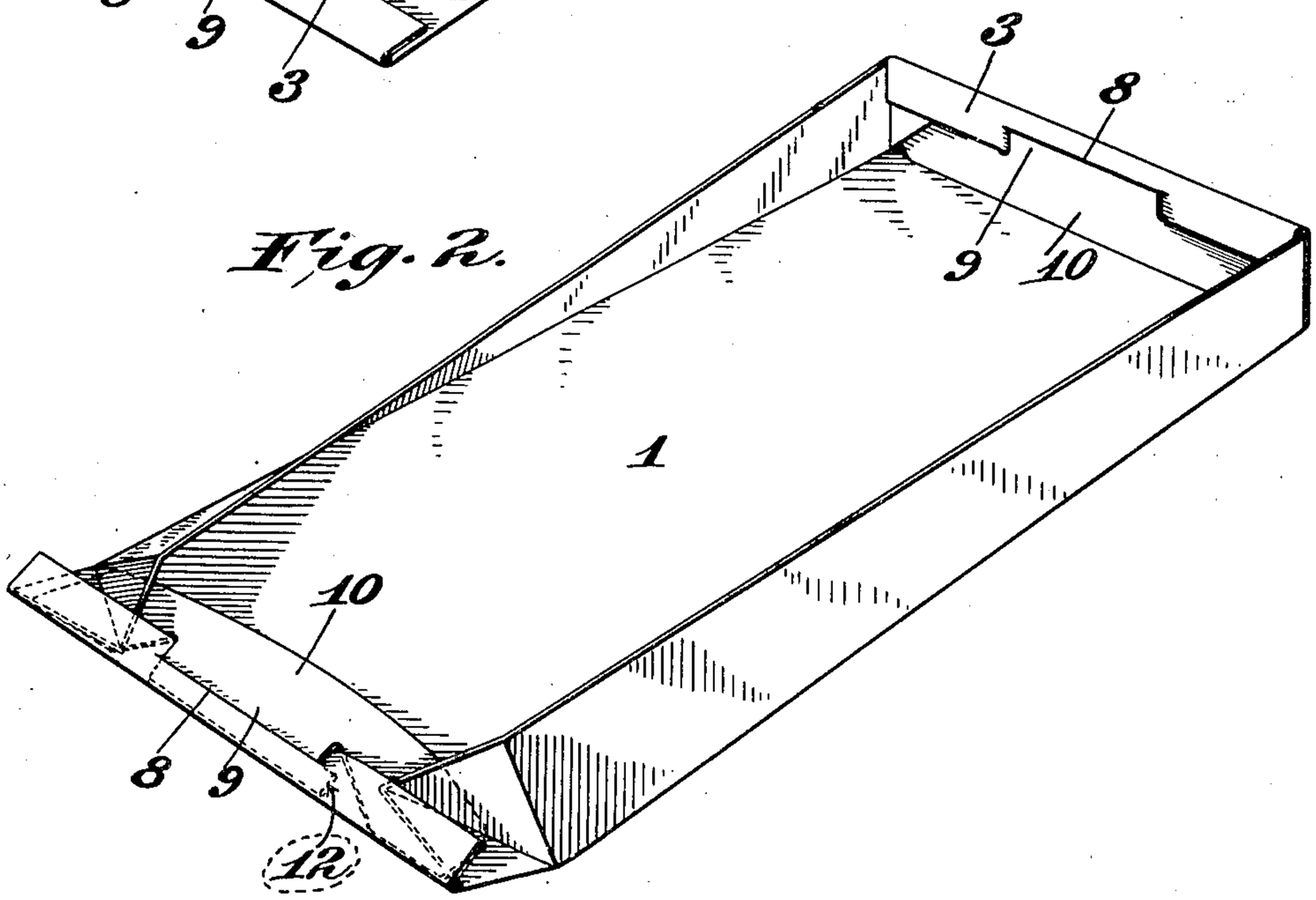


Fig. 2.



Witnesses:
G. A. Pennington
J. R. Megown

Inventor:
Frank H. Hougland,
By Cornet Cone,
Attys.

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2 SHEETS—SHEET 2.

Fig. 3.

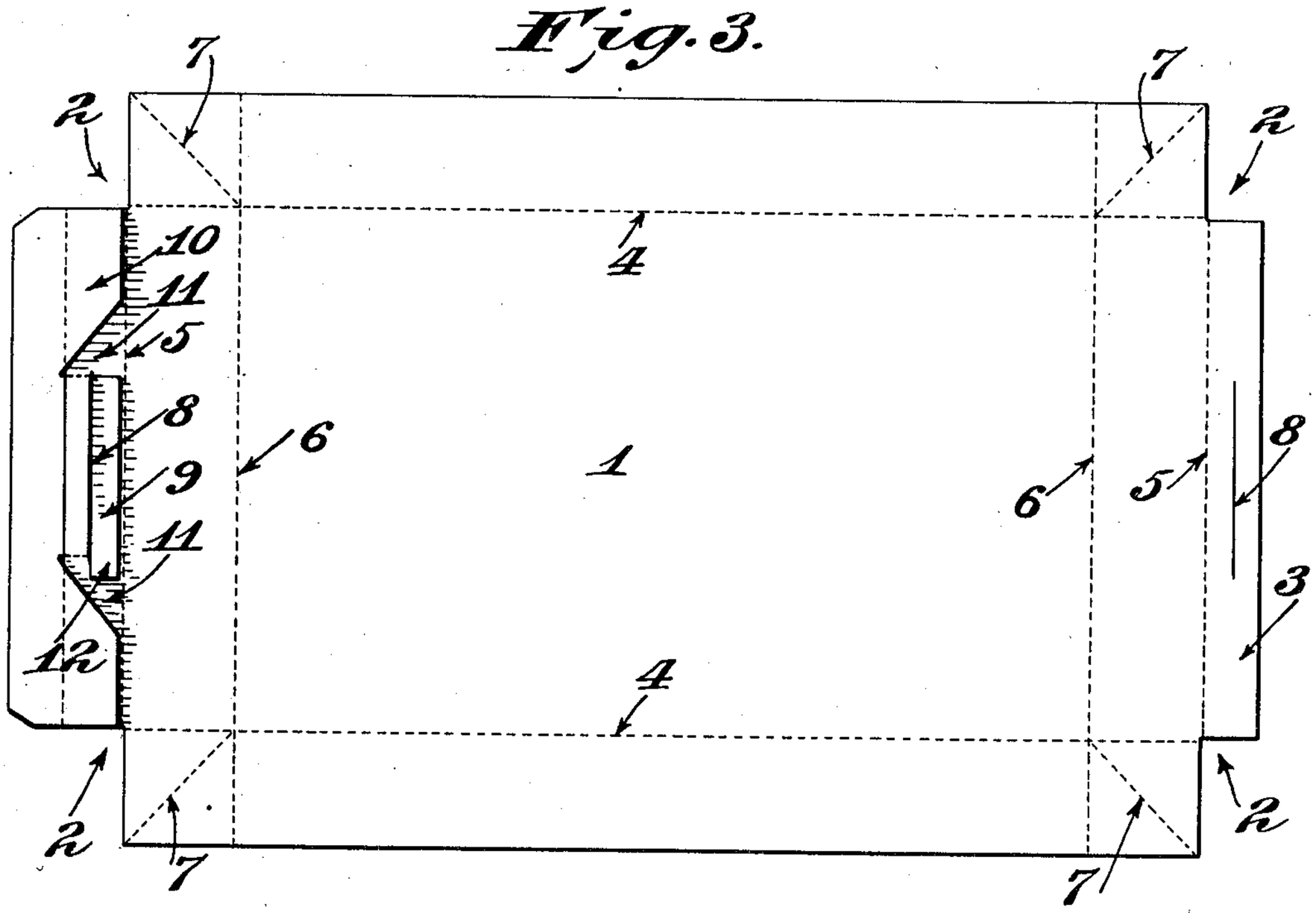
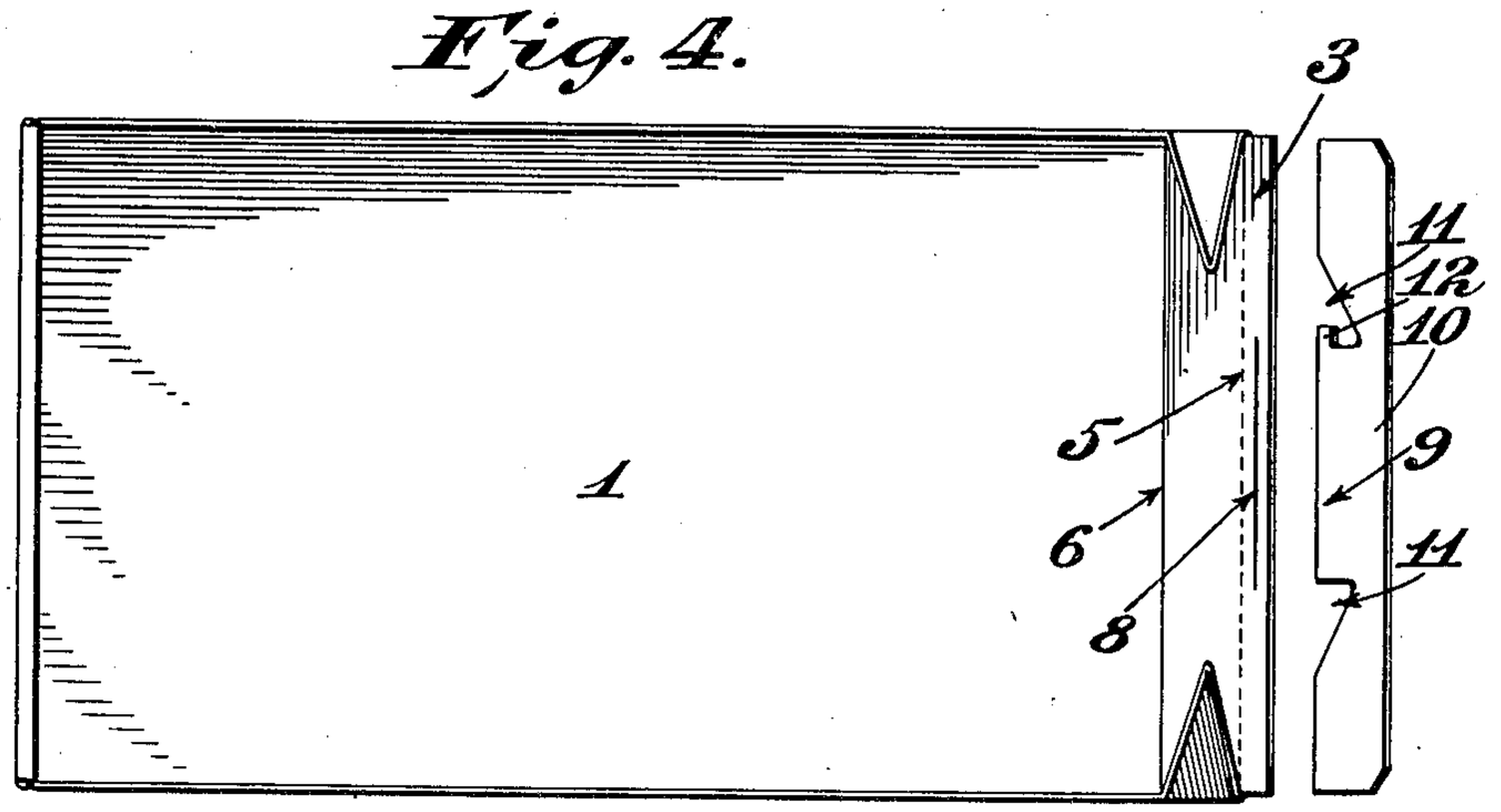


Fig. 4.



Witnesses:
G. A. Pennington
J. B. Megown.

Inventor:
Frank H. Hougland,
By Cameron & Cameron,
Attys.

UNITED STATES PATENT OFFICE.

FRANK H. HOUGLAND, OF ST. LOUIS, MISSOURI, ASSIGNOR TO ISSE SELIGSTEIN, OF ST. LOUIS, MISSOURI.

FOLDING BOX.

No. 895,564. Specification of Letters Patent. Patented Aug. 11, 1908.

Application filed February 17, 1908. Serial No. 416,232.

To all whom it may concern:

Be it known that I, FRANK H. HOUGLAND, a citizen of the United States, and a resident of the city of St. Louis and State of Missouri, have invented a new and useful Improvement in Folding Boxes, of which the following is a specification.

My invention relates to folding boxes and has for its principal objects to facilitate the operation of setting up the box, to reinforce the ends thereof, and to secure other advantages hereinafter appearing.

It consists in the construction and arrangements of parts hereinafter described and claimed.

In the accompanying drawing, which forms part of this specification, and wherein like symbols refer to like parts wherever they occur, Figure 1 is a perspective view of a box embodying my invention in collapsed condition; Fig. 2 is a perspective view thereof with one end fully set up and the other end in an intermediate stage of the setting up operation; Fig. 3 is a view of the blank having a reinforcing piece on one of the end flaps, the reinforcing piece at the other end being omitted; Fig. 4 is a plan view of a box showing one end partially unfolded and with the reinforcing member removed from the end flap.

The blank from which my box is made is a substantially rectangular sheet 1 having rectangular notches 2 at the corners thereof, that is, it is a rectangular blank having short flaps 3 reaching almost to the sides thereof. The sheet is scored lengthwise from end to end at a distance therefrom equal to the height of the box. These lines of scoring 4 coincide with the ends of the end flaps 3 formed by the removal of the corners of the blank. The blank is also scored along lines 5 which coincide with the ends of the sides of the blank. These lines of scoring form the flaps 3 at the ends of the box. The blank is also scored along transverse lines 6 parallel with the ends of the blank and at a distance from the ends of the sides thereof equal to the height of the box. This system of scoring forms squares at the corners of the blank whose sides are equal to the height of the box. Each of these squares is scored diagonally along lines 7 from its innermost corner to its outermost corner. Each of the end flaps has a slit 8 extending longitudinally thereof. Through this slit extends the flap 9 of a reinforcing member 10 whose length is equal to the internal width of the box and whose width is approximately equal to the inside height of the box. The flap of this reinforcing member is formed by notches 11 cut in the inner or lower edge of said member, one of said notches being of such shape as to form a tongue 12 or interlocking portion. In practice, the tongue is inserted into the slit from the original back or underside of the end flap, the interlocking tongue being first inserted and then slid into interlocking position. In mounting the reinforcing member of the flap, the ends of the reinforcing member should lie next to that face of the flap which constitutes the upper surface of the original blank.

In order to set up the box, the sides and ends are bent up along the lines of scoring and the square corners are folded inwardly. The end flaps with the reinforcing members secured thereto are then folded down with the reinforcing member under the folded corners of the blank and with the flap itself overhanging said corners. In this position the parts are firmly interlocked and the reinforcing member acts as a strut to increase the rigidity of the box.

In order to collapse the box, it is merely necessary to exert pressure against the ends thereof, in which case the sides of the box fold inwardly along their lines of scoring, while the ends of the box unfold or go back to their original positions in the blank. In this operation, the diagonal half of the corner squares attached to the sides of the box bear against the end portion of the respective end flaps, which end flaps spring or yield sufficiently to permit the unfolding movement of such diagonal portions. Ultimately, these diagonal portions lie flatwise against the reinforcing member which intervenes between them and the ends of the box, as illustrated in Fig. 1. In order to set up the box, it is only necessary to turn up the ends thereof and to see that the end flap attains its proper position as the innermost member at the end of the box.

The construction above described constitutes the body of a box, but it is understood that the lid or cover is formed in the same

way, and the word "box" is intended to cover the construction whether used as a body or a cover.

What I claim is:

1. A folding box comprising a rectangular blank having flaps at its ends, said blank being scored to form sides and ends of the box and having the rectangular corners scored diagonally, said end flaps having longitudinal slits and reinforcing members in said slits.

2. A folding box comprising a rectangular blank scored parallel with its sides and ends and from the intersections of such scorings to the corners of the blank, the ends having slitted flaps and reinforcing members mounted in such slits.

3. A folding box comprising a rectangular blank scored parallel with its sides and ends and from the intersections of such scorings to the corners of the blank, the ends of said blank having flaps thereon and reinforcing members mounted on said flaps, the ends of said blank having longitudinally slit flaps folded inwardly to overlie the folded corner portions of the blank, and reinforcing members having tongues coöperating with the slits of the respective end flaps, the ends of said reinforcing members underlying said folded corner portions of the blank.

4. A folding box comprising a rectangular blank scored parallel with its sides and ends and from the intersections of such scorings to the corners of the blank, the ends of said blank having flaps thereon and reinforcing members mounted on said flaps, the ends of said blank having longitudinally slit flaps folded inwardly to overlie the folded corner portions of the blank, and reinforcing members having tongues coöperating with the slits of the respective end flaps, the ends of said reinforcing members underlying said folded corner portions of the blank, the width of said reinforcing members being substantially the same as the depth of the box and of a length equal to the interior width of the box.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses this 11th day of February, 1908, at Kansas City, Missouri.

FRANK H. HOUGLAND.

Witnesses:
W. B. FINNEY,
INIS PAYNE.