

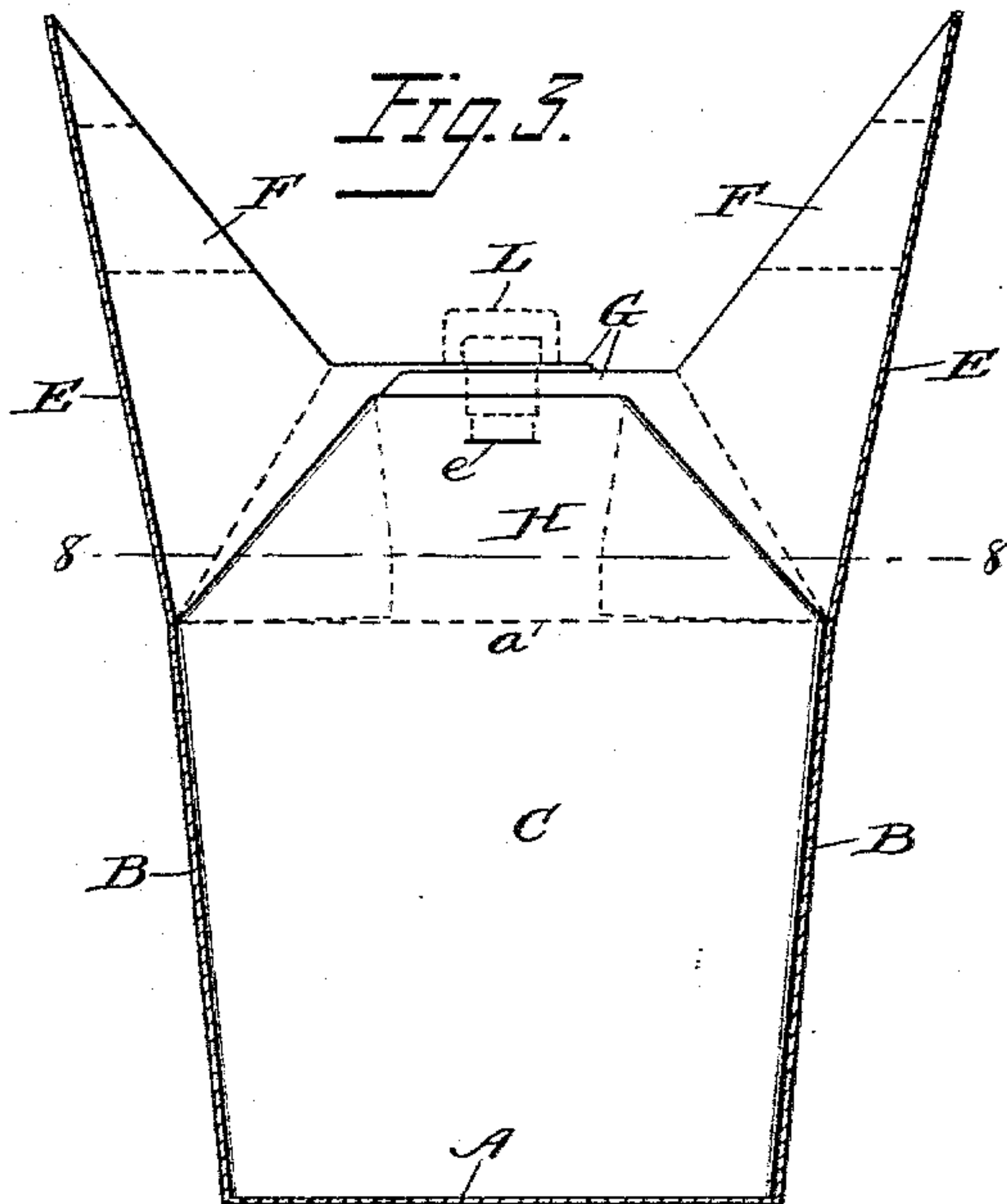
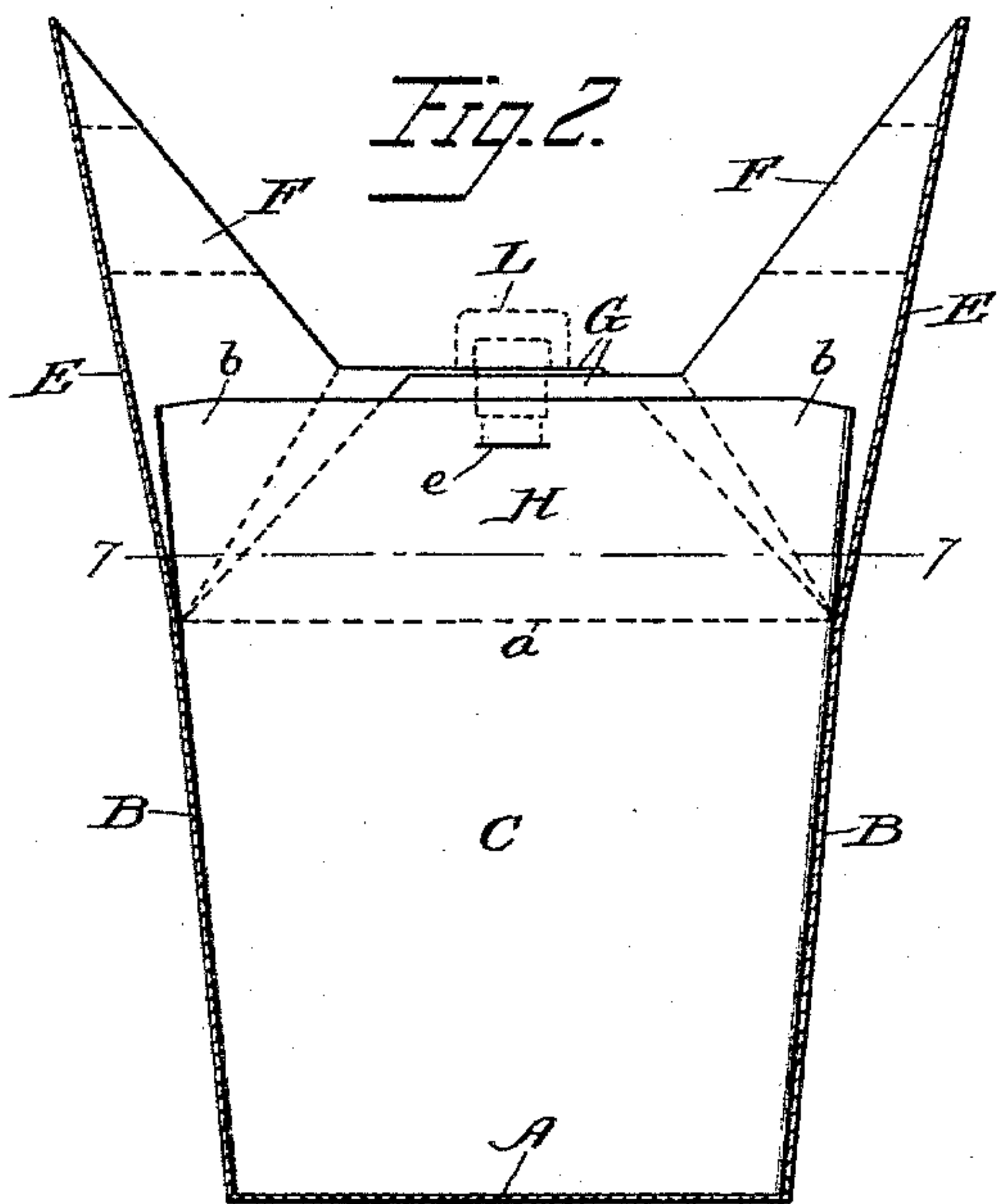
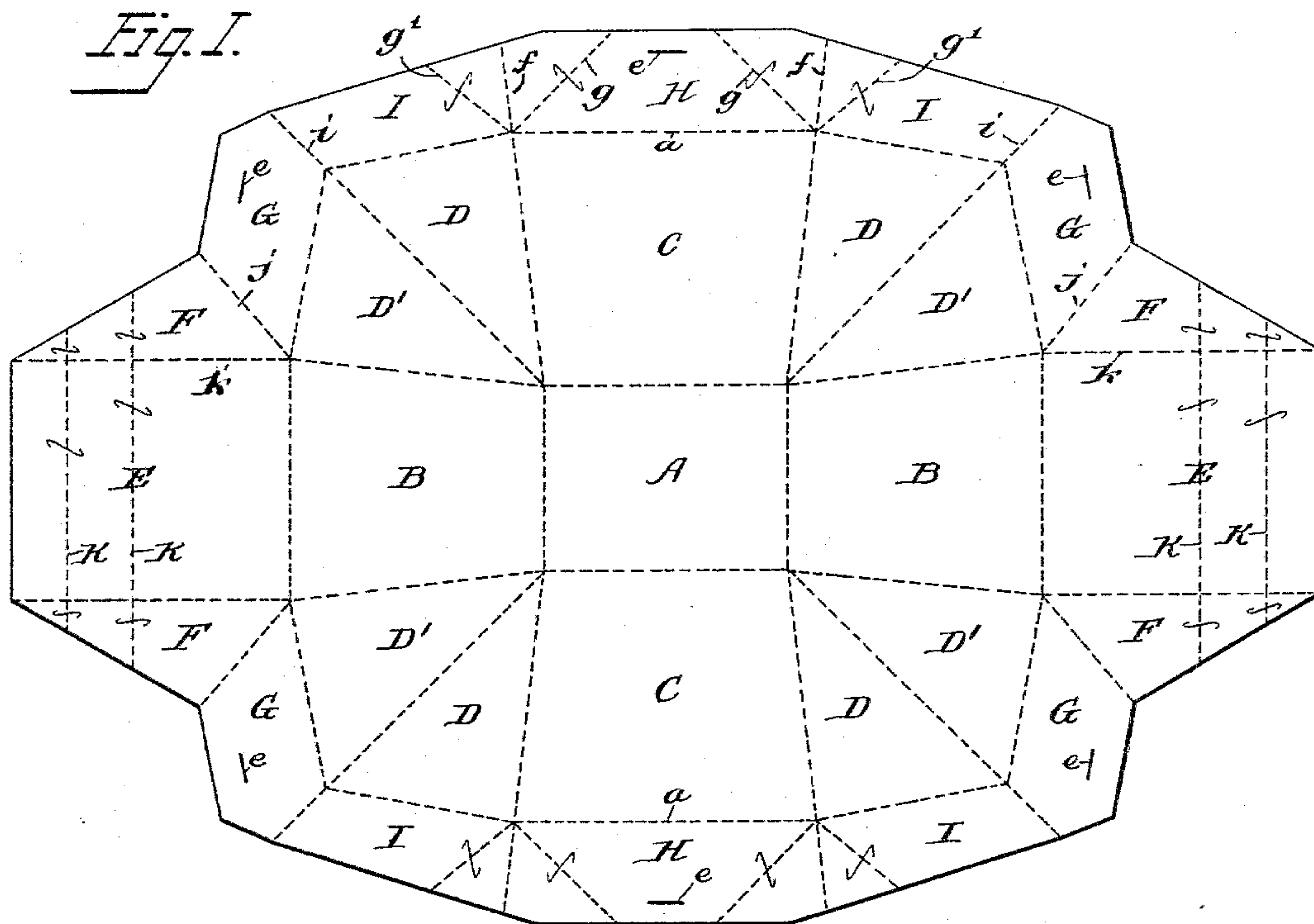
(No Model.)

2 Sheets—Sheet 1.

I. W. HOLLETT.  
PAPER VESSEL.

No. 571,831.

Patented Nov. 24, 1896.



Witnesses  
Martin H. Olsen.  
Leonora Wiseman

Inventor  
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his atty.

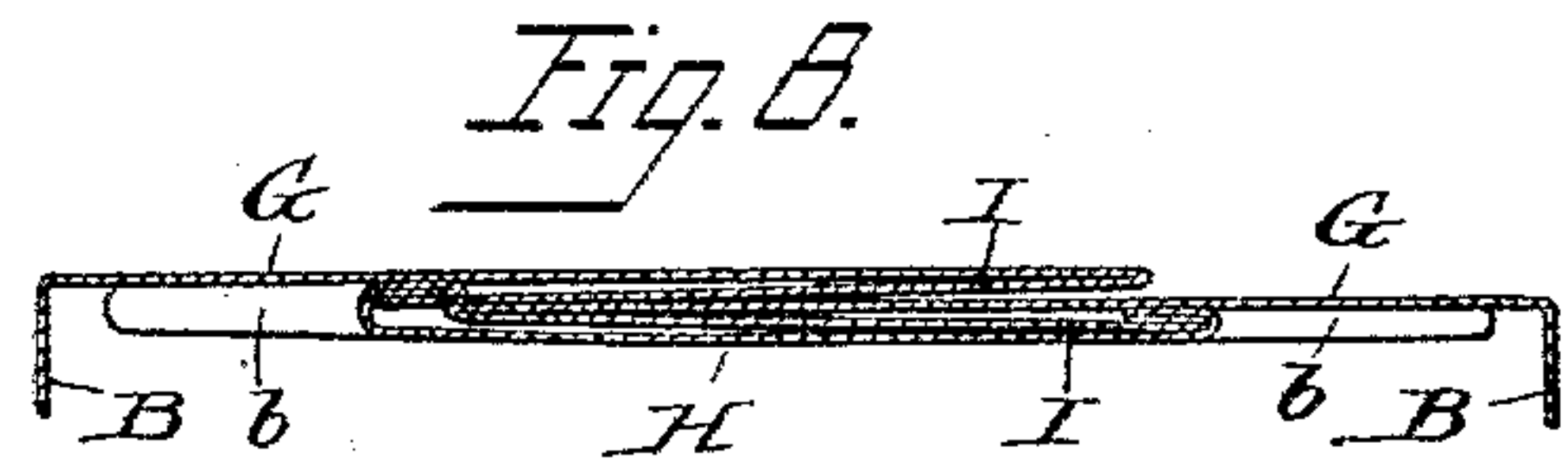
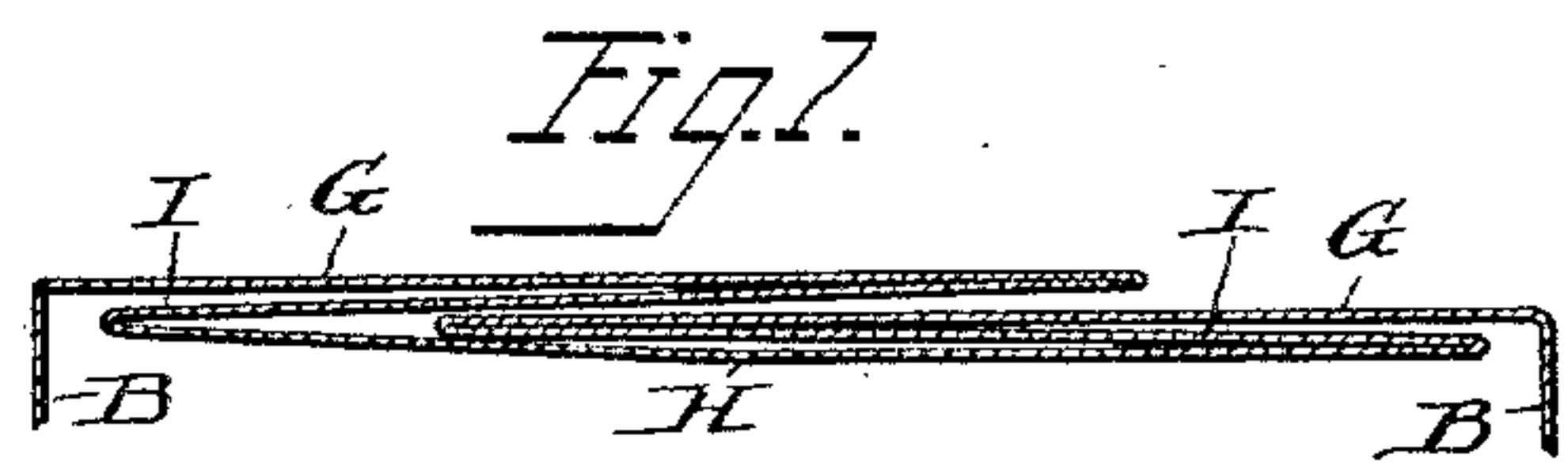
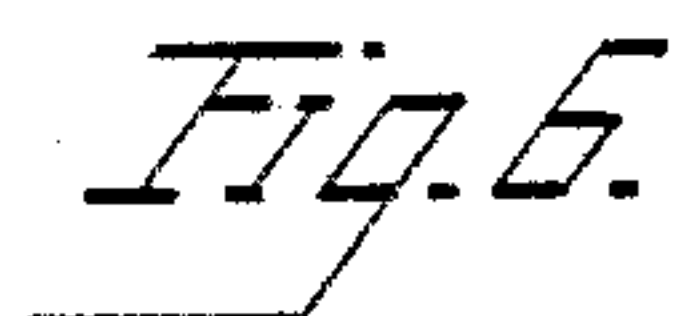
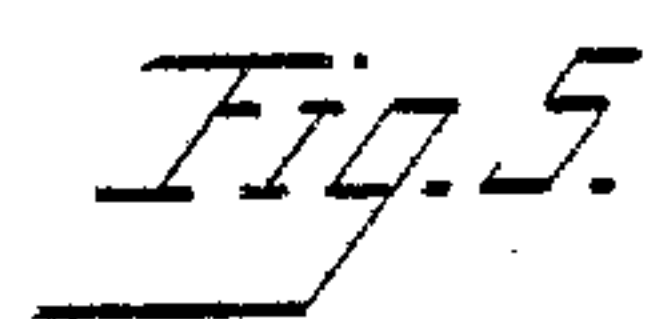
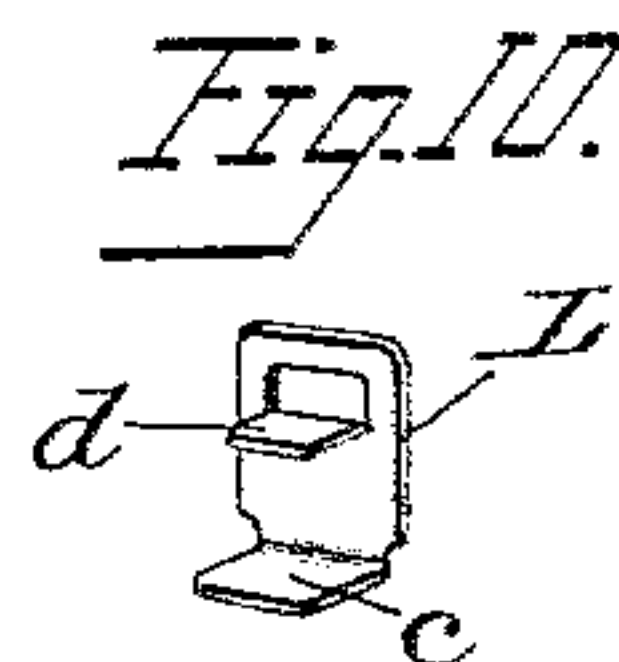
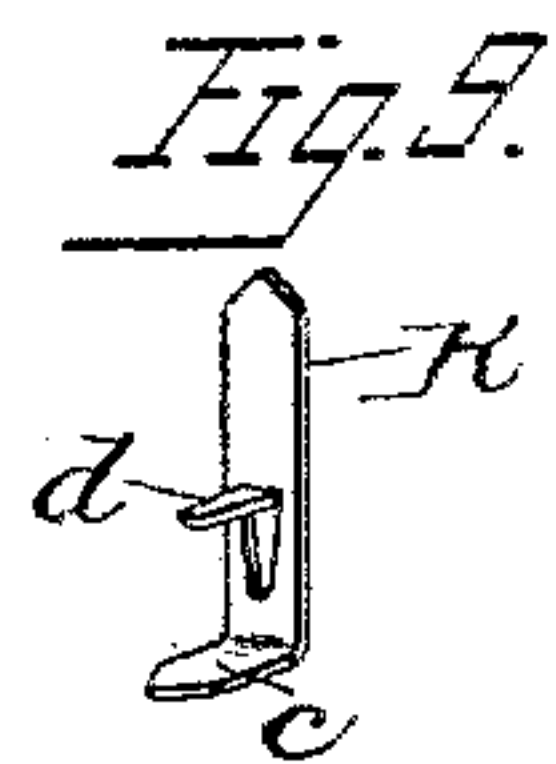
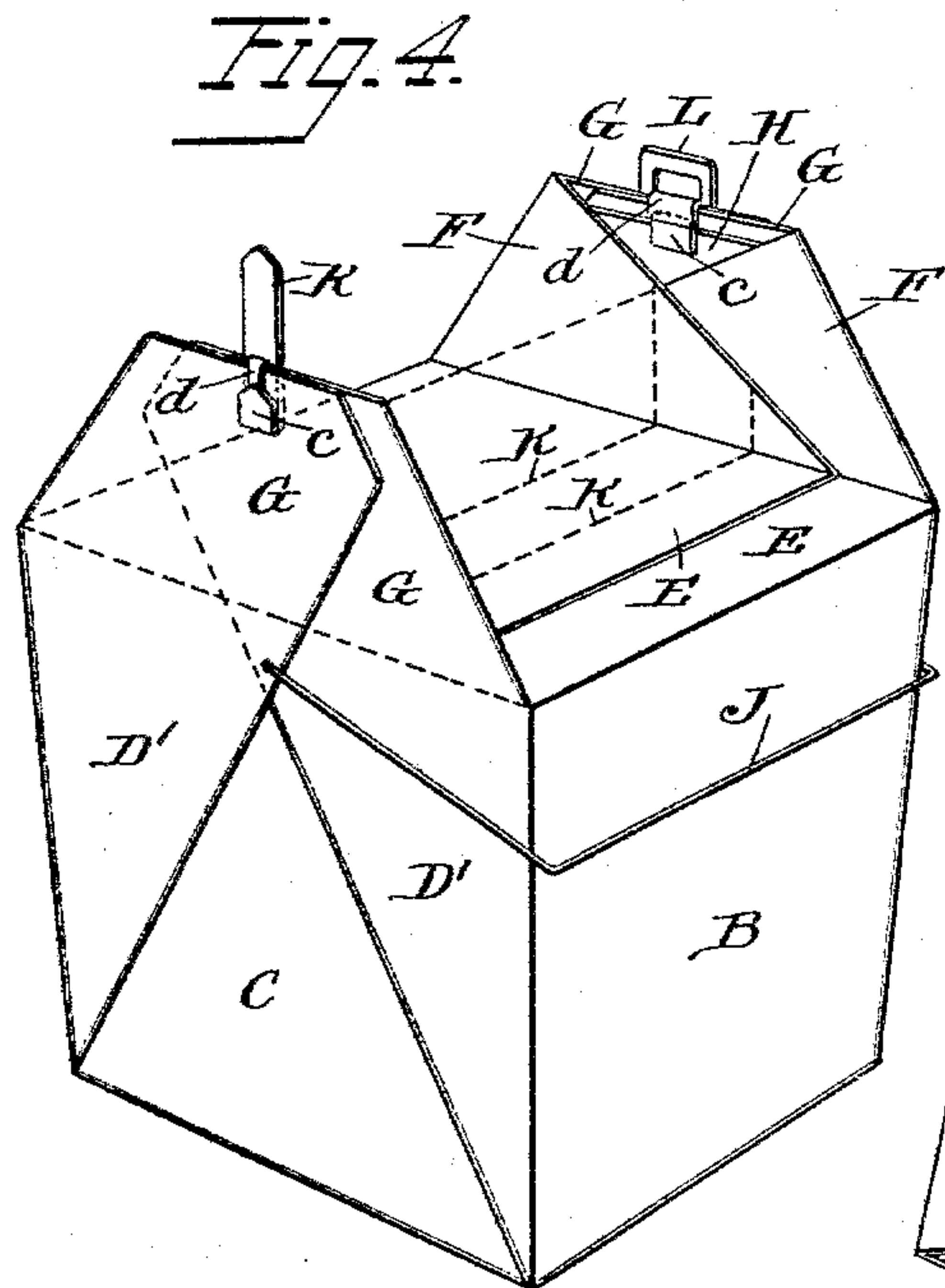
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2 Sheets—Sheet 2.

I. W. HOLLETT.  
PAPER VESSEL.

No. 571,831.

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# UNITED STATES PATENT OFFICE.

IRA W. HOLLETT, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE J. W. SEFTON MANUFACTURING COMPANY, OF SAME PLACE AND ANDERSON, INDIANA.

## PAPER VESSEL.

SPECIFICATION forming part of Letters Patent No. 571,831, dated November 24, 1896.

Application filed March 30, 1896. Serial No. 543,892. (No model.)

*To all whom it may concern:*

Be it known that I, IRA W. HOLLETT, a citizen of the United States, residing at Chicago, Cook county, in the State of Illinois, have  
5 invented a certain new and useful Improvement in Paper Vessels, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

10 My invention relates more particularly to that class of paper vessels used for carrying oysters and liquids and semiliquid substances; and it consists in an improvement upon the paper vessels shown and described in Patents  
15 No. 416,810, to John L. Sefton, and No. 515,820, to William E. Crume.

The first object of the invention is to render the vessels of those two prior patents more perfectly slop-proof, to prevent the liquid escaping from the vessel while the latter  
20 is being handled, and its second object is to stiffen the cover of the vessel, so as to brace the upper portion of the body of the vessel and hold it firmly in shape and prevent it  
25 collapsing while being carried by the bail. These two features of my invention are independent improvements upon the paper vessels as heretofore made, and either  
30 may be employed to advantage without the other.

A further feature of my invention consists in the provision of novel fastening devices for securing together the several folds constituting the opposite side walls and then fastening  
35 together the vertical extensions of said walls when bent downward to horizontal position across the cover of the vessel.

In the accompanying drawings, Figure 1 is a plan view of the flat blank from which the  
40 vessel is folded, the dotted lines indicating the creases along the lines of fold; Fig. 2, a transverse vertical section through the folded vessel before the corners of the side extensions are folded down; Fig. 3, a similar view  
45 after said corners are bent into place; Fig. 4, a perspective view of the vessel with the cover bent down into position; Figs. 5 and 6, perspective views of the vessel, showing a different way of folding the cover; Figs. 7 and 8,  
50 sectional details on the lines 7 7 and 8 8 of Figs. 2 and 3, respectively; and Figs. 9 and 10, perspective details of the fastening devices.

The same letters of reference are used

to indicate identical parts in all the drawings. 55

The body of the vessel consists of the bottom A, ends B B, sides C C, and the folds D D', intermediate the sides and ends at the four  
60 corners. The ends B B are provided with lateral extensions E E, which form the top or cover of the vessel when the blank is folded into vessel shape, and these extensions E E  
65 are connected with the corner-folds D D' at their respective ends of the blank by the parts F G, separated from each other by the crease j and from the extension E by the crease k, the parts G forming end extensions of the  
70 corner-folds D' and the parts F side extensions of the parts E E, constituting the cover of the vessel. This much of the blank, with the exception hereinafter pointed out, is substantially the same as the blank shown in the  
75 Crume patent before referred to. In folding such a blank into vessel shape the sides and ends are brought to upright position and the corner-flaps D D' bent over upon the outer  
80 faces of the sides C C and overlapped thereon, one upon another, as seen in Figs. 4 and 5. When brought to such position, the parts G G at opposite sides of the vessel will overlap each other and project vertically above  
85 the upper edges a a of the sides C C of the vessel, Figs. 2 and 3, and form vertical extensions of the side walls of the vessel, adapted to bend down over the cover portions  
90 E E when the latter are brought to position to close the vessel, as in Fig. 4. Under this construction, which is that of the Crume patent, the solid walls of the sides of the vessel terminate at the upper edges a a  
95 of the parts C C, the cover of the vessel being bent down upon said edges when in place, and such being the case it is difficult to prevent the liquid in the vessel from slopping over the upper edges a a of the sides C C and  
100 running down their outer sides between them and their overlapped corner-flaps whenever the filled vessel is jostled or carelessly handled. These vessels as heretofore constructed have therefore not been slop-proof, and for  
105 that reason have, to a considerable extent, proved unsatisfactory for the handling of liquids and semiliquid substances. I have improved the vessel in this respect and made it substantially slop-proof by providing the  
sides C C with the extensions H H, separated from the sides C C by the creases a', and the



corner-flaps D with the extensions I, separated from the parts G by the creases *i* and from the extensions II by the creases *f*, Fig. 1. With these extensions the side walls of the vessel extend above the upper edges of the parts C substantially as high as the parts G in the vessel as heretofore made, Fig. 2. The extensions II II are provided with the diagonal creases *g* and the parts I with the corresponding creases *g'*, so that in folding the blank into vessel shape, after the blank has been brought to the shape shown in Figs. 2 and 7, the corners of the extensions II and adjacent corners of the extensions I may be bent outward and tucked behind the parts II and I, between the latter and the parts G, as seen in Figs. 3 and 8. This will bring the sides of the vessel into final shape, in which shape they may be held by the attachment of the fastening devices K L, the former consisting of a sheet-metal tongue passed through and clenched upon the parts G G, I I, and II, at one side of the vessel, and the latter of the sheet-metal plate L, passed through and clenched upon the same parts at the opposite side of the vessel, and having an opening for the reception of the tongue K when these parts are bent down upon the top of the vessel and fastened to each other.

From the foregoing description it will be understood that there is no passage for the escape of liquids from the interior of the vessel except over the upper edge of the vertical extensions II II of the sides C C, and when the vessel is folded into closed position in the manner above described these extensions are bent downward to horizontal position over the top of the vessel, since they form part of the vertical extensions of the side walls, which are bent down and fastened together in the manner described. The result is that there is no chance for the liquid to escape over the upper edges of the sides of the vessel and run down beneath the overlapped corner-folds as heretofore, and as the cover portions E E fit snugly upon one another and are overlapped nearly the full width of the vessel and are held down by the side extensions bent upon them and secured by the fastening devices it follows that the vessel is made substantially slop-proof. So, too, in the vessels as heretofore made without the side extensions II II the only means for securing the corner-flaps D D' to the sides C C was by passing the ends of the wire bail through all of said parts and clenching or bending them over upon the inner surfaces of the sides C C. This made a perforation entirely through each side of the vessel, which, though at first entirely filled by the ends of the bail passing through them, were apt to become enlarged by wear and strain upon them when the filled vessel was carried by its bail and permit the contents of the vessel to leak out and run down the sides.

In my improved vessel the corner-folds are secured to the sides. So, too, the projecting ends of the bail upon the inner surfaces of the

side walls of the vessel, even when clenched down upon the same in the usual manner, interfered more or less with the nesting of the vessels. As is well known, for the purpose of storing or shipping vessels of this character in compact form they are nested one within another while in open position, as in Figs. 2 and 3, fifty or a hundred vessels being usually snugly fitted one within another in each nest. Heretofore in so arranging the vessels the projecting ends of the wire bail upon the inner surfaces of the side walls of each vessel were apt to stand in the path of the overlapped corner-flaps D D' of the next vessel above as the latter was pressed down into the lower vessel and to contact with such corner-flaps at their point of junction immediately below the point where the ends of the bail pass through them, Figs. 4 and 6, and either arrest the descent of the upper vessel and prevent it fitting snugly within the lower one or serving to mutilate it if it were forcibly pressed downward into the lower one of the vessel by the fastening devices K L, passed through the extensions II II of the sides, so that it is not necessary to pass the ends of the wire bail through the sides C C at all, it being sufficient for their attachment to the vessel to pass them through the corner-folds alone and clench them upon the inner surfaces thereof outside the sides C C. There need, therefore, be no projecting ends of the wire bail upon the inner surfaces of the side walls of the vessel to interfere with the nesting of the vessels in the manner above described, and no holes through said side walls to permit leakage of the contents of the vessel.

The second feature of my invention consists in stiffening the cover portions E E in such manner as to brace the top of the vessel and prevent its collapsing when filled and carried by the bail. This has heretofore been accomplished by securing stiffening boards or strips upon said cover portions; but this adds to the expense of the vessel, both in materials and cost of labor, and I have provided means for accomplishing the same result without the provision of such separate stiffening devices. To that end I provide the cover portions E E with one or more, preferably two, creases K, extending transversely across the same and across the parts F F. When the cover portions are bent down into position to close the vessel, as in Fig. 4, these creases serve to brace the top of the vessel against pressure applied to its sides and prevent its collapsing under the weight of its contents when carried by the bail. These creases also permit the cover to be folded down in such a way, if desired, to still more firmly brace the cover of the vessel against lateral pressure and remove any possibility of the liquid escaping between the overlapped portions E E, in the manner shown in Figs. 5 and 6, instead of that shown in Fig. 4. In Fig. 5 the vertical extensions of the side walls are first bent outward to horizontal



position and the cover portions E E brought together, as shown, the parts thereof outside or above the inner creases K K fitting against each other in vertical position, while the balance of the parts E E rest in horizontal position. The vertically-projecting portion is then bent over upon itself along the upper or outer creases K, and folded down upon the horizontal portion forming the top of the vessel, and the side extensions then bent upward, as seen in Fig. 6. The top of the vessel is thus braced against lateral pressure by five thicknesses of paper, while the folding of the ends of the parts E E together upon themselves completely closes the vessel and prevents any possibility of the liquid escaping. After the parts are brought to the position shown in Fig. 6 the side extensions are bent down across the top of the vessel and secured by the fastening devices K L in the manner before described.

So far as the two features of my invention above described are concerned the metal fastening devices K L may be constructed and applied in the usual or any suitable manner, but in the present instance such fastening devices are novel, and their construction and application to the vessel constitute a third feature of my invention. As seen in Figs. 9 and 10, each consists of a strip or plate of sheet metal having its lower end *c* bent at right angles to the main portion of the strip or plate, while struck from the plate at a suitable distance above its bent lower end is a tongue *d*, projecting outward over the said end *c*. The several folds of the paper blank constituting the side walls of the vessel are provided with slits *e*, Fig. 1, which coincide with each other when the blank is folded into vessel shape, as seen in Figs. 2 to 6. In applying the fastening device K or L to the side of the vessel its lower bent end *c* is passed through the slits *e*, and the latter are preferably located at such distance from the upper edge of the side wall that the projecting tongue *d* will fit snugly over said edge. The end *c* and tongue *d* are then bent toward each other and pressed firmly against the side wall of the vessel, the end of one overlapping the end of the other where they are long enough for that purpose, as seen in Figs. 4 to 6. In their general construction and method of application the fasteners K and L are the same, as above described, but in order that the fastener L may have an aperture for the reception of the fastener K the fastener L is made of a wider strip or plate and its tongue *d* is cut from the upper portion of the plate and bent downward, leaving an aperture above the upper edge of the side wall of the vessel for the reception of the fastener K when the side-wall extensions are bent downward to close the vessel. The tongue *d* of the fastener K might be struck from its plate at the same distance from its lower end as is the tongue *d* of the fastener L, but in the present instance it is cut at a lower point in the plate

and bent upward instead of downward, so that the two tongues stand at about the same distances from the lower ends of the respective fasteners.

The provision of the tongues *d* in the fasteners, overlapping and bent down over the upper edges of the side walls of the vessel, serves to very firmly secure the fasteners to the vessel and prevent their becoming loosened in handling or use, as they frequently do where they are secured only by their lower ends passing through the walls of the vessel and bent upward against the same. These fasteners are especially useful in coöperation with each other, as illustrated and described in this case, but their utility is not confined to such coöperative use, and they may be advantageously employed upon other and different paper vessels independently or in coöperation with each other.

Having thus fully described my invention, I claim—

1. The herein-described paper vessel, formed from a single blank having the bottom portion A, end walls B B provided with the extensions E E, sides C C, having the extensions H H separated from the sides C C by the creases *a a*, and each provided with the two diagonal creases *g g*, the corner-flaps D D' intermediate the ends B and sides C at the four corners of the blank and having the extensions I G separated from each other by the crease *i* and separated from the extension H by the crease *f*, the extensions I being each provided with the diagonal crease *g'* connecting at its inner end with the adjacent creases *f g*, the parts F intermediate the extensions G and E and separated from the former by the crease *j* and from the latter by the crease *k*, said blank being folded into vessel shape in the manner described so that the corner-flaps D D' overlap the sides C C and the extensions G I fit against the outer sides of the extensions H H, the corners *b b* of the parts H I being bent outward and downward and tucked behind said parts H I as described, and the closure of the vessel being accomplished by bending the extensions E E of the end walls B B downward to horizontal position over the top of the vessel, with the parts F F overlapping each other against the inner faces of the extensions H H of the sides C C, and by then bending downward to horizontal position across said extensions E E the vertical extensions of the side walls composed of the parts F G H I, said vertical extensions of the side walls being provided with suitable fastening devices for securing the parts H G and I together and for connecting said extensions and holding them in horizontal position after they have been bent downward thereto, substantially as and for the purpose set forth.

2. The herein-described paper vessel, formed from a single blank having the bottom portion A, end walls B B provided with the extensions E E, sides C C, having the extensions H H separated from the sides C C



by the creases *a a*, the corner-flaps *D D'* intermediate the ends *B* and sides *C* at the four corners of the blank and having the extensions *I G* separated from each other by the crease *i* and separated from the extensions *H* by the crease *f*, the parts *F* intermediate the extensions *G* and the extensions *E* and separated from the former by the crease *j* and from the latter by the crease *k*, said blank being folded into vessel shape in the manner described so that the corner-flaps *D D'* overlap the sides *C C* and the extensions *G I* fit against the outer sides of the extensions *H H*, the closure of the vessel being accomplished by bending the extensions *E E* of the end walls *B B* downward to horizontal position over the top of the vessel, and by then bending downward to horizontal position across said extensions *E E* the vertical extensions of the side walls composed of the parts *F G H I*, said vertical extensions of the side walls being provided with suitable fastening devices for securing the parts *H G* and *I* together and for connecting said extensions and holding them in horizontal position after they have been bent downward thereto, and the wire bail *J* passed at its opposite ends through or secured to the overlapped corner-flaps *D D'* at the opposite sides of the vessel below the vertical extensions of the side walls thereof, but not passing through the sides *C C* to the interior of the vessel, substantially as and for the purpose set forth.

3. A paper vessel having vertical extensions of its side and end walls adapted to be bent downward to horizontal position across the top of the vessel to form the cover, said extensions of the end walls thereof being provided with the transverse creases *k* adapted to stiffen the same and to brace the upper portion of the vessel and resist lateral pressure against the same tending to collapse it, substantially as described.

4. The herein-described fastening device *L* for paper vessels, consisting of a sheet-metal plate having its lower end bent at an angle to the body of the plate, to adapt it to pass through a slit in the wall of the vessel, and having a tongue struck from the body of the plate and bent outward and downward toward and over the bent lower end of the plate, to leave an aperture in the plate above said tongue, said tongue being adapted to fit over the edge of the wall of the vessel and to be bent down upon the same with the lower end of the plate, substantially as described.

5. In a paper vessel, the combination of the fasteners *K L*, each consisting of a sheet-metal strip or plate having its lower end bent at an angle to the body of the plate and passed through a slit in the side wall of the vessel, and each having a tongue struck from the body of the plate and bent over the upper edge of the side wall of the vessel, said tongues and the lower ends of the plates being bent downward toward each other upon the walls of the vessel, the fastener *L* having in it an

aperture above the edge of the side wall of the vessel formed by its tongue struck from the plate and bent downward, said aperture being adapted to have the end of the fastener *K* passed through it and bent backward upon itself, substantially as and for the purpose described.

6. In a paper vessel having vertical extensions of its side walls adapted to be bent downward across the top of the vessel to close the same, the combination, with one of such vertical extensions of the side walls, of the fastening device *L*, consisting of a sheet-metal plate having its lower end *c* passing through a slit in such extension and bent upward against the surface of the same, and having a tongue *d* struck from the body of the plate and bent outward therefrom and downward over the upper edge of said extension, leaving an aperture in the plate above said tongue, said tongue and the lower end of the plate passing through the slit in the extension being bent toward each other and pressed against the surface of said extension, to secure the plate thereto, and a suitable cooperating fastening device upon the vertical extension of the opposite side wall of the vessel, adapted to cooperate with the aperture in the plate *L*, substantially as described.

7. In a paper vessel having its side walls provided with vertical extensions adapted to be bent downward across the top of the vessel to close the same, the combination, with one of such vertical extensions of the side walls, of the fastening device *L*, consisting of a sheet-metal plate having its lower end *c* passed through a slit in the extension and bent upward against the surface thereof, and having a tongue *d* struck from the body of the plate and bent outward and downward over the upper edge of the extension, toward the upturned lower end of the plate, leaving an aperture in the plate above said tongue, and the cooperating fastening device *K* secured to the vertical extension of the opposite side wall of the vessel and consisting of a sheet-metal plate having its lower end *c* passed through a slit in such extension and bent upward against the surface of the same and having a tongue *d* struck from the body of the plate and bent outward and downward over the upper edge of the extension toward the upturned lower end of the plate, the upper end of said plate *K* being adapted to pass through the aperture in the plate *L* at the opposite side of the vessel when the vertical extensions of the two side walls are bent downward toward each other across the top of the vessel, and be bent backward upon itself to connect said extensions and hold them in horizontal position, substantially as described.

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