

(No Model.)

I. W. HOLLETT.
PAPER VESSEL.

No. 571,526.

Patented Nov. 17, 1896.

Fig. 1.

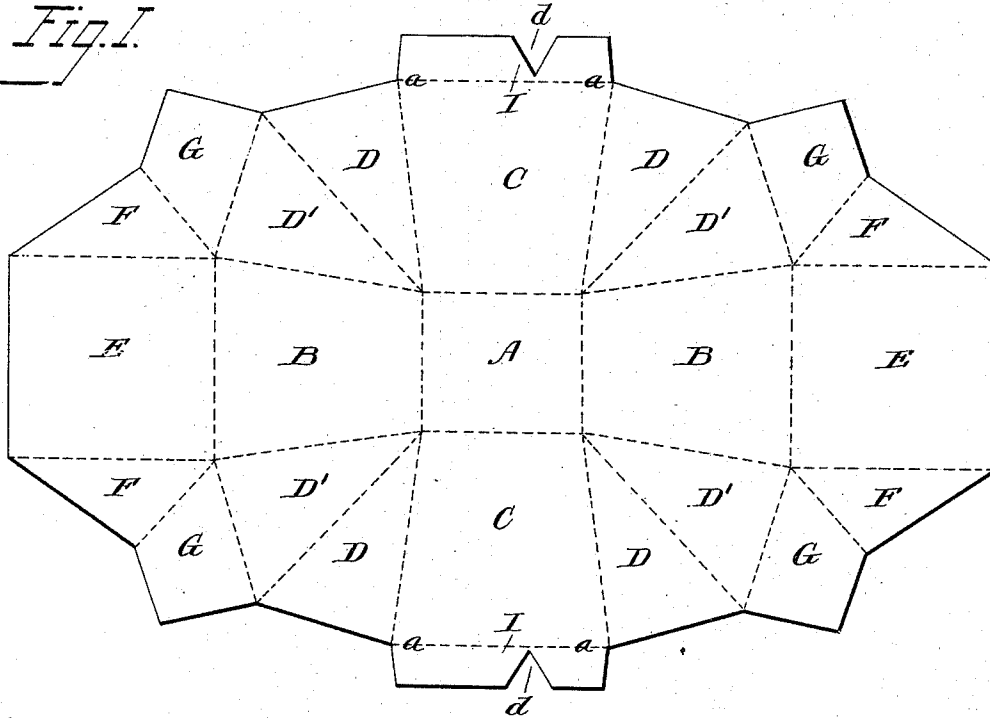
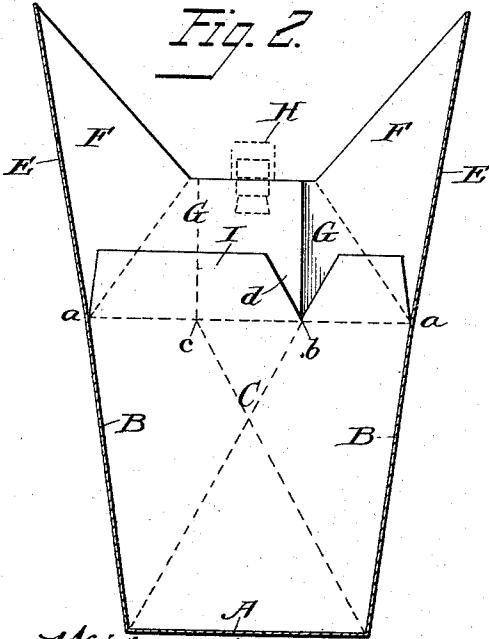
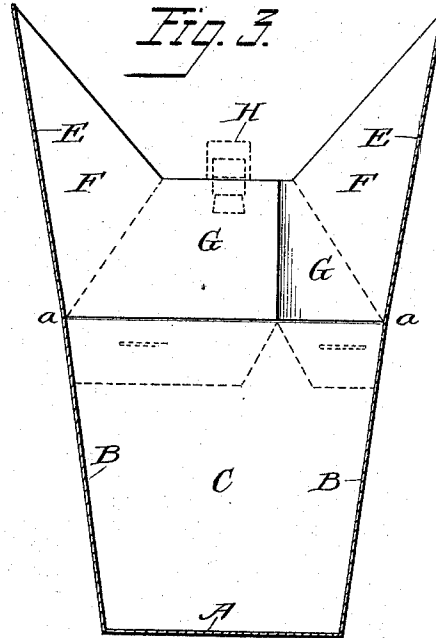


Fig. 2.



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Fig. 3.



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PAPER VESSEL.

SPECIFICATION forming part of Letters Patent No. 571,526, dated November 17, 1896.

Application filed January 7, 1896. Renewed September 2, 1896. Serial No. 604,675. (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, in the county of Cook and State of Illinois, have 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.

My invention relates to paper vessels folded from a single piece of paper and used more especially for carrying liquid and semiliquid substances, and has for its object the production of a more perfectly water-tight or slop-proof vessel than those heretofore in use.

In the particular form illustrated in the drawings it consists more especially in an improvement upon the paper vessels shown and described in Patents No. 416, 810, to John L. Sefton, and No. 515,820, to William E. Crume.

The novelty of the invention will be hereinafter more fully explained, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 represents a plan view of the blank from which the 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 upper edges or flaps of the side walls thereof are folded down, and Fig. 3 a corresponding view after said flaps are bent down to the position they occupy in the completed vessel.

The same letters of reference are used to indicate identical parts in all the figures.

The body of the vessel consists of the bottom A, ends B B, sides C C, and the corner-folds D D' intermediate the sides and ends at the four corners. The ends B B are provided with the 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 are connected with the corner-folds D' by the parts F G. This much of the blank is old and is substantially the same as the blank shown in the patents 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 faces of the sides C C and overlapped thereon, as indicated by the dotted lines in Fig. 2 (the

dotted lines being omitted from Fig. 3 to avoid confusion) and as is common in this class of vessels. In this position of the parts the flaps G G at each side of the vessel will overlap each other, as seen in Figs. 2 and 3, and may be secured together by the usual or any suitable metal fastener H. This leaves the end extensions E E projecting upward from each end of the box, with the parts F F, which connect them with the parts G G, standing in vertical position. To close the top of the vessel, the ends E E are bent inward and downward to horizontal position, one upon the other, the creases between the parts E E and F F and between the parts F F and G G permitting this movement and leaving the parts F F at each side of the vessel overlapped against the inner faces of the parts G G, as usual. To then secure the cover in place, the vertical side extensions composed of the overlapped parts G G, projecting above the body of the vessel, and the parts F F, overlapped against them, are bent downward toward each other across the top of the vessel to horizontal position and connected together by the fastening devices.

Now in a vessel such as that above described the side walls C C of the vessel terminate at the upper edge of the body of the vessel at the line *a a*, the edge of the blank being exposed at that point. When the blank is folded into vessel shape and the corner-folds D D' overlapped against the side of the vessel, as indicated by the dotted lines in Fig. 2, one of the folds D, in the present instance the upper left-hand one of Fig. 1, will fit directly against the left-hand portion of the outer face of the side C, while the fold D upon the opposite side of the part C (the upper right-hand one of Fig. 1) will fit against the right-hand portion of the side C, with its upper left-hand corner overlapping the upper right-hand corner of the opposite folds D D', as shown by the dotted lines. The upper edges of the left-hand one of these folds will therefore coincide with the upper edge of the side C, along the dotted lines *a a* in Fig. 2, from the left-hand side of the vessel to the point *b*, the two edges being approximately flush with each other, while the upper edge of the opposite fold D will coincide with the

upper edge of the side C and fit against and flush with the same along the line *a a* from the right-hand side of the vessel to the point *c*. At the left of the point *b*, between that point and the point *c*, the fold D just referred to (the right-hand one) will be separated from the side C by the interposed upper right-hand corner of the opposite folds D D', the right-hand folds D D' overlapping said left-hand ones between *b* and *c*, as before explained. The result is that when the vessel is in the open position shown in Fig. 2 there is an open slit or narrow passage along the upper edge of each side wall C and the upper edges of the folds D D, which fit against it. So long as the folds D D are pressed tightly against the side C this narrow slit will be substantially closed, but in handling the vessel, there being nothing to hold the folds D D tightly against the side C, this slot or narrow passage is liable to be opened more or less by any contact or pressure tending to separate the side C from the folds D D, with the result that the liquid contents of the vessel, if dashed upward against the side of the vessel, will escape to a greater or less extent over the upper edge of the side C and run down upon its outer surface between it and the overlapped folds D D. Even when the vessel is completely closed and the vertical side extensions are bent down across its top and secured together by the fastening devices, as heretofore explained, any rough handling or undue shaking of the vessel when filled with liquid contents will cause said contents, when dashed against the sides and top of the vessel, to escape over the upper edges of the sides C C in the manner described. The result has been that vessels constructed as above described have not been sufficiently slop-proof to be entirely satisfactory for the handling of liquid and semiliquid substances.

Various means have been proposed for rendering the vessels more perfectly slop-proof, one of which has consisted in providing the sides C C with extensions projecting upward substantially as high as the upper edges of the parts G G in Figs. 2 and 3, and then bending such side extensions downward across the top of the vessel with the parts G G and F F, when the latter were bent down to close the vessel. This arrangement was efficient for the purpose, but not economical, since it materially increased the size of the piece of paper from which the blank was cut, inasmuch as the side extensions projected a considerable distance from the outer or upper edges of the sides proper and had to be connected with the parts G at each corner of the vessel by a suitable interposed connecting part.

In my improved vessel I have provided means for making the vessel substantially slop-proof without materially increasing the size of the blanks and the consequent cost of the vessel. I accomplish this result by providing each of the sides C C with a comparatively narrow extension I, which is not bent

inward across the top of the vessel with the parts G and F, as were the side extensions above described, but are bent outward and downward over the upper edges of the corner-folds D between such corner-folds and the overlapping corner-folds D'. Each of the side extensions I is provided with a V-shaped notch *d*, and when the blank is folded into vessel shape the notch *d* at each side of the innermost one of the two overlapping parts G, as seen in Fig. 2. This permits the portion of the extension I at the left of the notch *d* to be bent outward and downward over the upper edge of the innermost corner-fold D between the same and its overlapping corner-fold D', while the portion of the extension I at the right of the notch *d* may be bent downward over the upper edge of the outermost corner-fold D between the same and the outermost corner-fold D'. Now inasmuch as the only passages for the escape of liquid in the manner before described are between the upper edges of the sides C C and the upper edges of the corner-folds D D, which fit against them, it follows that the bending downward of the extensions I I of the sides C C over the upper edges of the folds D D entirely closes such passages and prevents the possibility of the liquid escaping through them.

It is true that the vessel is not absolutely water-tight at the exact point where the notches *d* in the extensions I meet the upper edges of the sides C C proper, but the opening left at said points is so minute as to be substantially unappreciable and in practice not sufficient to permit the escape of the liquid.

If desired, staples may be passed through the sides of the vessel at the points indicated by the dotted lines in Fig. 3 to more securely hold the parts.

Having thus fully described my invention, I claim—

1. The herein-described paper vessel folded in the manner set forth from a single blank and having its side walls C C provided along their upper edges with the extensions I I adapted to be bent outward and downward over the upper edges of the corner-folds D D and fit between the latter and the corners D' D', substantially as and for the purpose specified.

2. The herein-described paper vessel folded from a single blank composed of the bottom portion A, ends B B, sides C C, corner-folds D D', end extensions E E, and parts F G, folded into vessel shape in the manner described, and the sides C having the extensions I provided with the notches *d*, each extension I being bent outward and downward over the upper edges of the adjacent corner-folds D D at the opposite sides of its notch *d*, substantially as and for the purpose specified.

IRA W. HOLLETT.

Witnesses:

JAMES E. CLENNY,
J. G. REBER.