

April 14, 1931.

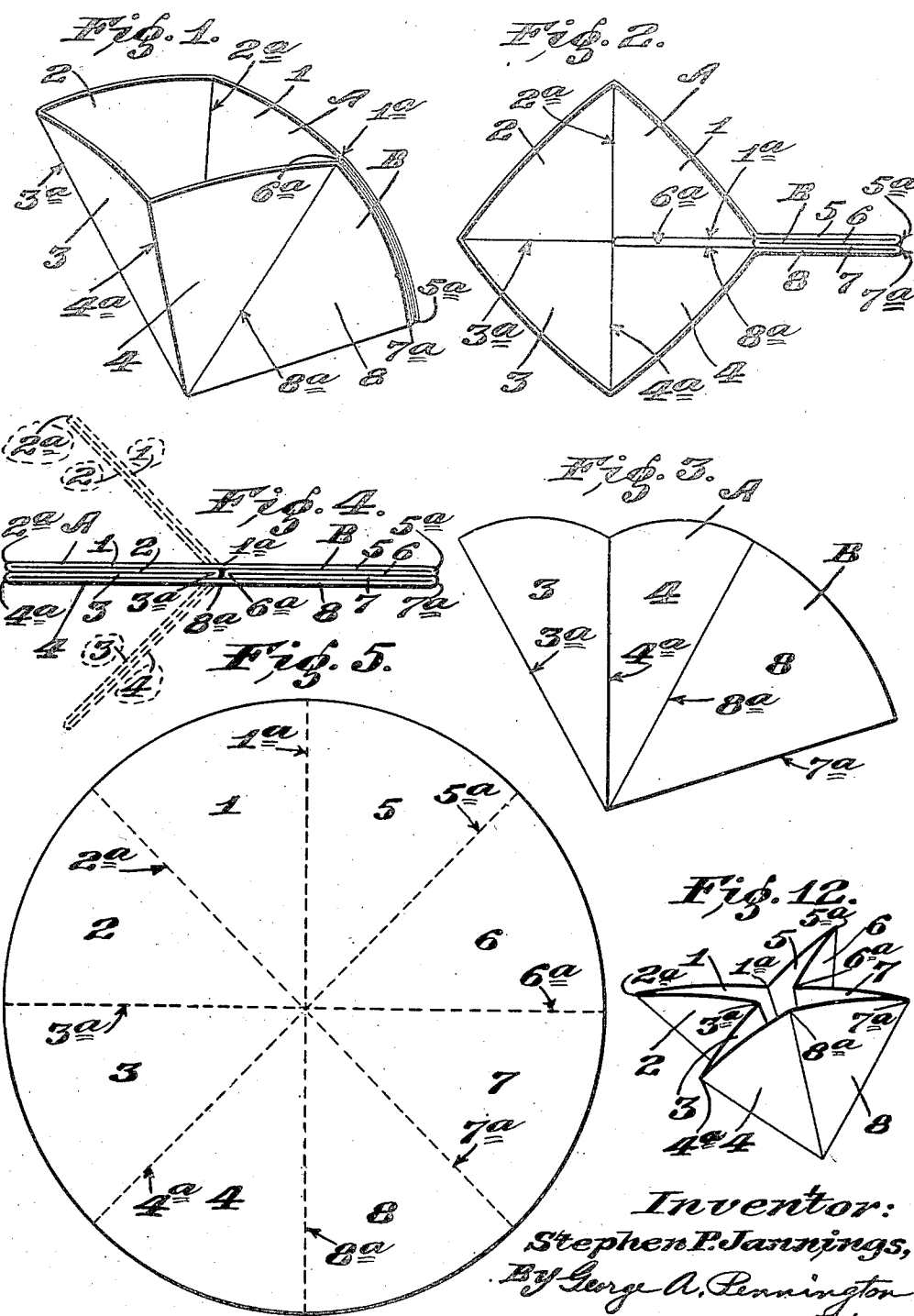
S. P. JANNINGS

1,800,534

DRINKING CUP OR CONTAINER

Filed April 21, 1927

2 Sheets-Sheet 1



Inventor:
Stephen P. Jannings,
By George A. Pennington
his Atty.

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Fig. 6.

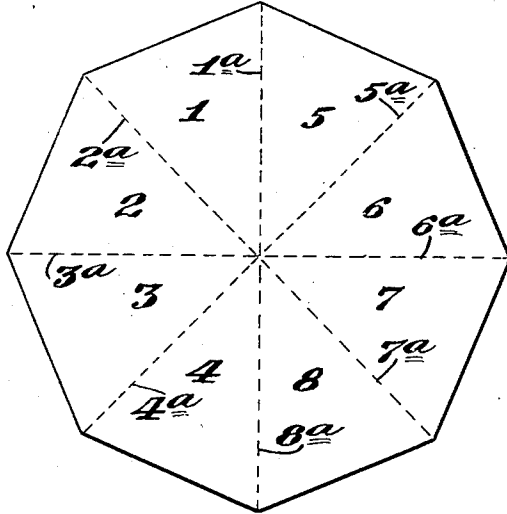


Fig. 7.

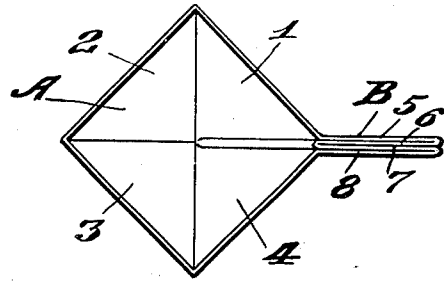


Fig. 8.

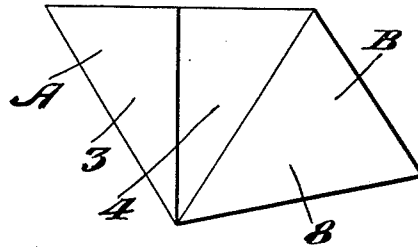


Fig. 10.

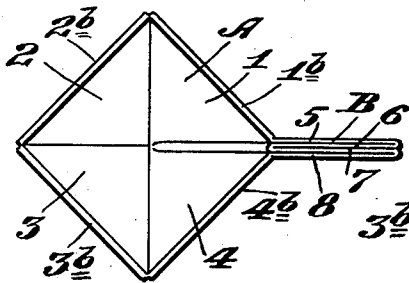


Fig. 11.

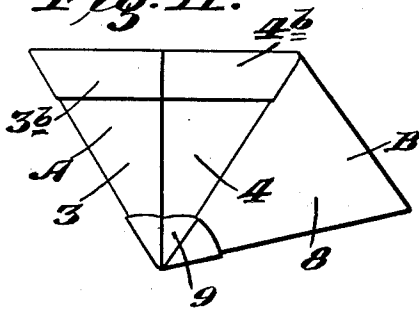
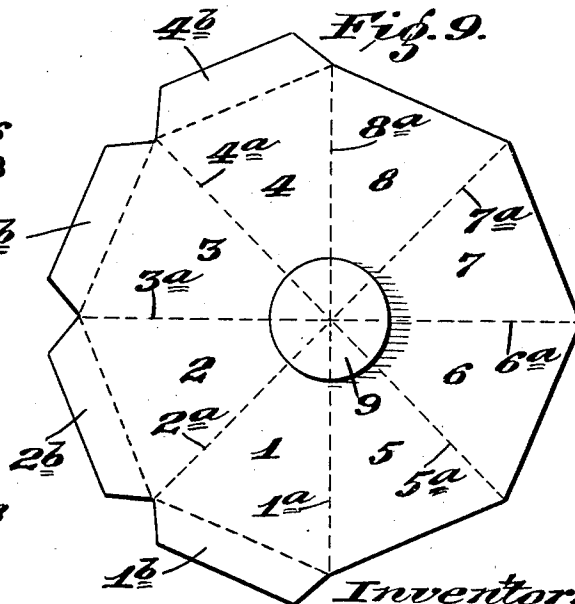


Fig. 9.



Inventor:
Stephen P. Jannings,
By George A. Pennington
his Atty.

UNITED STATES PATENT OFFICE

STEPHEN P. JANNINGS, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO JAMES A. MOSLEY, OF JENNINGS, MISSOURI

DRINKING CUP OR CONTAINER

Application filed April 21, 1927. Serial No. 185,591.

This invention relates to drinking cups or containers. It has for its objects to produce a simple, inexpensive and practical, one-piece, sanitary cup or container, made of paper, cardboard or other suitable material, which may be normally folded flatwise so as to occupy minimum space in storage or in a dispensing device, and being conveniently opened for use, yet possessing considerable inherent rigidity and stability of structure; to provide the article with a substantial handle portion by which it can be conveniently held in the hand in use; and to attain certain advantages as will hereinafter more fully appear.

The invention consists primarily in the novel one-piece structure, in the general form and arrangement of the article, and in the parts and combinations and arrangements of parts, all as hereinafter described and afterwards pointed out with particularity in the appended claims.

In the accompanying drawings forming part of this specification and illustrating practical embodiments of the invention,—

Figure 1 is a perspective view of the cup or container in opened condition and ready for use;

Figure 2 is a top plan view thereof;

Figure 3 is a side elevation of the same;

Figure 4 is an edge view of the cup or container in normal folded condition;

Figure 5 is a plan view of the blank from which the cup or container shown in Figures 1, 2 and 3 is formed;

Figure 6 is a similar view of a modification of the blank from which the cup or container may be formed;

Figure 7 is a top plan view of the cup or container as produced from the blank illustrated in Figure 6;

Figure 8 is a side elevation of the latter;

Figure 9 is a plan view of a further modification of the blank from which the cup or container may be formed;

Figure 10 is a top plan view of the cup or container as produced from the blank illustrated in Figure 9;

Figure 11 is a side elevation of the latter;

Figure 12 is a schematic perspective view illustrating the manner of folding each of the several blanks shown in Figures 5, 6 and 9 of the drawings.

Generally stated, the preferred form of the cup or container as shown in the drawings, when in opened condition and ready for use, comprises a four-sided, tapered and upwardly flaring body or receptacle portion A of substantially pyramidal shape, with an integral, substantially fan-shape or sector-like handle extension B.

The article may be formed from a single sheet of paper, cardboard or other suitable material possessing the requisite sanitary and liquid-proof qualities together with flexibility and a certain degree of stiffness, the blank being originally a disk-like sheet of either circular or polygonal form, as will be presently described.

In practice, it is preferable to produce the cup or container from pre-paraffined paper or relatively light weight cardboard, or by treating it, after formation, with paraffine or other suitable moisture-proofing substance, as may be found the more practicable in manufacture.

The cup or container, as illustrated in Figures 1 to 3, inclusive, of the drawings, is formed from a circular blank, which latter is illustrated in Figure 5. As shown, this blank is divided into eight equal sectors which are respectively numbered 1 to 8, inclusive, the blank being creased or scored along the radial lines 1^a to 8^a, inclusive, running from its center to its margin, and on which lines the blank is folded in forming the article.

In folding the blank the creases 1^a, 3^a, 6^a and 8^a, are pressed inward towards each other, and the creases 2^a, 4^a, 5^a and 7^a, are pressed outward, as best shown in Figure 12 of the drawings. The folds comprising the sectors 5, 6, 7 and 8, are then pressed flatwise together, as shown in Figures 1, 2 and 4, and being thus folded they constitute a comparatively rigid handle portion for the cup or container, as designated by the reference letter B in Figures 1 to 4, inclusive, of the drawings.

It may be here stated that the folded sec-

tors 5, 6, 7 and 8, are preferably cemented firmly together in the manufacture of the cup or container. Obviously, this may be accomplished by the application of a special adhesive, or as has been found very practical, the paraffine or other liquid-proofing substance with which the paper or constituent material of the article is treated may be utilized for the purpose, particularly when the material is treated after the creasing and folding operations on the blank have been performed, in which case, the said handle folds of the blank may be held under compression until the paraffine or other substance has hardened or set sufficiently to bind them together. However, if the paper or other material from which the article is produced is pre-treated, particularly with paraffine, it is only necessary to heat the folded handle portion of the article sufficiently to soften the paraffine and then place said folded portion under compression until the paraffine has again hardened or set. In this way, the handle member B is made relatively stiff and substantial.

Instead of making the blank circular, as just described, it may, obviously, be made polygonal and, preferably, octagonal as shown in Figure 6 of the drawings. In this modification the lines of the creases extend diagonally from the marginal corners of the blank and intersect each other at the center of the blank. The resultant cup or container produced from this blank is substantially identical with that produced from the circular blank as herein first described, except that, in the modification, the edges of the side walls, at the mouth of the cup or container, are straight as shown in Figures 7 and 8, whereas, in the article shown in Figures 1 to 3, inclusive, the edges are arcuate.

The structure may be further modified as illustrated in Figures 9 to 11, inclusive, of the drawings. In this modification the sectors 1, 2, 3 and 4, are each provided with marginal flaps or extensions 1^b, 2^b, 3^b and 4^b, respectively, which are adapted to be folded over upon the walls of the receptacle portion A of the cup or container, preferably on the outer face thereof, as best shown in Figure 11, whereby to reinforce the edge portions of the article and to make the edges smooth, so as not to cut the lips, as might accidentally occur from the raw edges of the blank as originally cut, when drinking from the cup.

The blank may also be reinforced at its center by the application thereto of a piece of fabric 9, preferably cemented on its outer face (see Figure 9), so that the pointed end portion of the cup or container will be materially strengthened, at which place the constituent material of the cup or container is most liable to breakage owing to the intersection of the several creases of the blank.

While the blanks of the several modifications, as illustrated in the drawings, are divided into eight equal sectors so as to produce the substantially pyramidal, four-walled cup or container, it is to be understood that the invention is not limited to such form and arrangement, but that it admits of considerable further modification within its spirit and scope as defined by the appended claims, for it comprehends, broadly, the production of a cup or container, of pyramidal or any other shape, from a single-piece blank of circular form or one of a regular polygonal shape, said blank being divided into a plurality of sectors which are folded together to constitute a handle member for the cup or container, and the receptacle portion of the cup or container being preferably foldable and collapsible but not necessarily so. For example, the original blank may be hexagonal, instead of octagonal as shown, and it may be divided into six equal sectors, four of which may constitute the receptacle portion of the cup or container, and the other two thereof folded together to constitute the handle member, in which case the receptacle portion will, of course, be substantially pyramidal. So, too, the two sectors which comprise the handle member may be re-divided into two halves each and the four smaller sectors thus produced will obviously produce a handle member of four thicknesses of material, but just one-half the size of the two thickness handle yet being of ample proportions for holding the cup or container conveniently between the thumb and forefinger of one's hand. This may also be done with the circular blank shown in Figure 5 of the drawings or with the octagonal blank shown in Figures 6 and 9, in which cases the handle sectors 5, 6, 7 and 8, may each be divided in half so as to produce eight smaller sectors of equal size, which, of course, when folded flatwise together, produce a handle member of eight thicknesses of material.

It is further obvious that the several blanks may be creased and divided into sectors only sufficient for the production of the handle member of the cup or container, and the remainder thereof left uncreased, in which case, the receptacle portion of the cup or container will be of conical instead of pyramidal shape. While this form of the article is not foldable and collapsible as to the receptacle portion thereof, the handle member, however, may be readily folded over upon the body, and several of the articles may be nested the one within the other for storage the same as any other conical or tumbler-shaped cup or receptacle. So, too, the cups or containers of pyramidal form need not be normally folded flatwise and kept in collapsed condition in storage, for while that may be the ideal way to store

and dispense them, they may, in some cases, be nested and stacked as just above set forth in connection with the conical form.

What is claimed is:

5 1. A folding paper cup or container comprising a disk-like blank, said blank being divided into eight equal triangular sectors and being scored on the dividing lines of said sectors radiating from the center to the
10 margin of the blank, the scoring being alternately from opposite faces of the blank, whereby, in folding the blank, four adjoining sectors are brought normally flatwise together and the four other sectors are
15 brought into the same relation to each other, the one set of four sectors, when opened from their flatwise folded condition, constituting the walls of a pyramidal receptacle, and the other set of sectors being cemented together
20 throughout and constituting a four-ply handle member and liquid-tight closure for one corner of the receptacle.

2. A folding paper cup or container comprising a disk-like blank, said blank being
25 divided throughout into triangular sectors by folding it along lines radiating from center to margin of the blank, four adjoining equal sectors constituting a collapsible pyramidal receptacle portion, the walls of
30 which are normally folded flatwise together, two of the walls being folded co-operatively inward between the other two walls, and the remainder of the sectors being folded and cemented flatwise together throughout and
35 constituting an integral multi-ply handle member and liquid-tight closure for one corner of the receptacle.

STEPHEN P. JANNINGS.

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