Sept. 4, 1956 W. W. MONROE 2,761,448

EYE CUP

Filed Nov. 4, 1952

FIG. 1

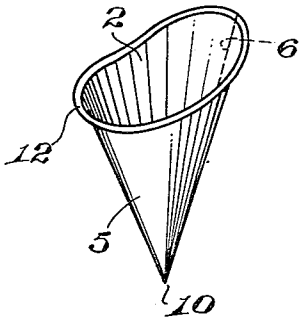


FIG. 2

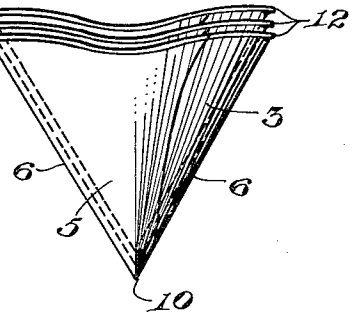


FIG. 3

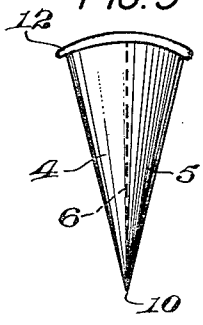


FIG. 4

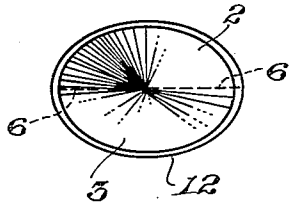
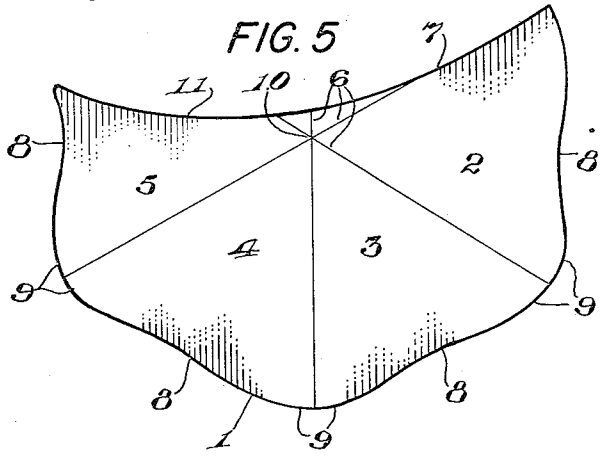


FIG. 5



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EYE CUP

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2 Claims. (Cl. 128—249)

The object of the invention is to provide improvements in such receptacles as eye cups, but while specific mention is hereinafter made to eye cups as a class, it is to be understood that the scope of the invention includes any and all receptacles to which the principles described and claimed may be adapted.

Another object is to provide an eye cup, for example, that in packing and shipping may be collapsed or flattened, or which, if preferred, may be nested one within another, and which, in any case, when considered individually, readily assumes a sufficiently expanded shape, as to make the contour of its normally upper open end closely conform to the three-dimensional curvature of the eyeball, as defined upon the outer surface of the eyelids.

A further object is to provide an improved eye cup of sheet material such as paper, parchment, or the like, that is impervious to moisture, yet stiff enough to hold its particular degree of expanded shape, to conform to the widest range of facial contours, and which will in no case offer the slightest degree of abrasive surface, points, or edges, to the skin or membranes of the user.

Still another object is to so form the improved eye cup as to provide an outwardly and slightly reversely turned flange or beading, for the purpose and towards the end of its engaging the skin or membranes with completely harmless and most comfortable contact surfaces, such as will insure the ultimate in uniform engagement and prevent the escape of liquid from within.

And a still further object is to provide a method of manufacture of the improved eye cup, which is characterized by the initial provisions of a sheet blank of paper, parchment, or the like, comprising substantially triangular areas, separated by suitable scoring or bead lines, and otherwise bordered by ogee or undulating curved edges, such that when the blank is properly folded along said lines, it will assume the roughly ox-yoke curve necessary for proper engagement with, and in order to conform to, the natural curvature of the human eye socket, as hereinafter brought out.

With the object thus briefly set forth, the invention comprises further details of construction, which are hereinafter fully explained in the following description, when read in conjunction with the accompanying drawings, in which Fig. 1 is a perspective view of an eye cup comprising the present invention; Fig. 2 is a side elevation of a plurality of the same nested for shipment and storage, as an alternative to shipping and storage in completely collapsed flattened form; Fig. 3 is an end elevation of a single such eye cup expanded for normal use; Fig. 4 is a top plan view of the article in operative extended form; and Fig. 5 shows in outline a flat blank from which the improved eye cup is formed.

Referring to the drawings, and to Fig. 5 in particular, a properly cutout blank 1 is formed of paper, parchment, or other suitable sheet material, and is essentially shown as comprising at least three roughly triangular sections 2, 3 and 4, and a portion an additional such section 5, said sections being defined by and between scored or bend lines 6, and the edge of the said blank opposite to said sections being of any desired configuration, as at 7. It will be noted that the outermost edge of each of said sections comprises a central, slightly cutback, concavely curved portion 8, between oppositely positioned outwardly or convexly curved portions 9, that merge into and form continuations of each other in each pair.

When this blank is folded along the scorings or bend lines 6, in a fashion of a cornucopia about the common intersection of said lines at 10, and the outer free edge 11 of the section 5 is secured as by rubber cement or the like to the outer surface of section 3, as indicated in Fig. 2, a generally conical cup is formed (Figs. 1–4), but which cup instead of being a true cone is somewhat flattened, so that when viewed from either its open end or its pointed end, its free edge appears as a substantially geometrical ellipse (Fig. 4). However, when viewed from what may be termed one of its ends, or in line with its scoring, fold, or bend lines (Fig. 3), it is transversely arcuate, and when viewed from either side (Fig. 2) its free edges assume the form of an ogee curve. By this carefully developed construction, there is provided a free edge of the cup, that closely corresponds to the three-dimensional shape of the continuous recesses that in general and externally define the limits of the average eyeball upon the outside of the eyelids, and when containing a liquid and lightly pressed into such recesses insure the retention of the liquid within the cup, and prevents its escaping either by steady stream or by droplets down the cheek of the user. Furthermore, by slightly rolling the outer free edge portions of said blank sections, a continuous beading 12 (Figs. 1–4) is provided, such that there are no otherwise free edges of the cup material to scrape, scratch, or similarly injure the skin and membranes of region of the eye.

Having thus described my invention, what I claim and desire to protect by Letters Patent of the United States is:

1. A sheet blank for an eye cup, comprising a plurality of generally triangular sections, the outer free edges of each of said sections having the shape of an ogee curve, and the ends of the curve of each sections being a continuation of the adjacent end of the curve of the sections next thereto in opposite directions.

2. A sheet blank for an eye cup, comprising a plurality of generally triangular sections, the outer free edges of each of said sections having the shape of an ogee curve, whose central portion is concave while its opposite portions are convex and form continuations of the curves of adjacent sections.

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