

Dec. 17, 1968

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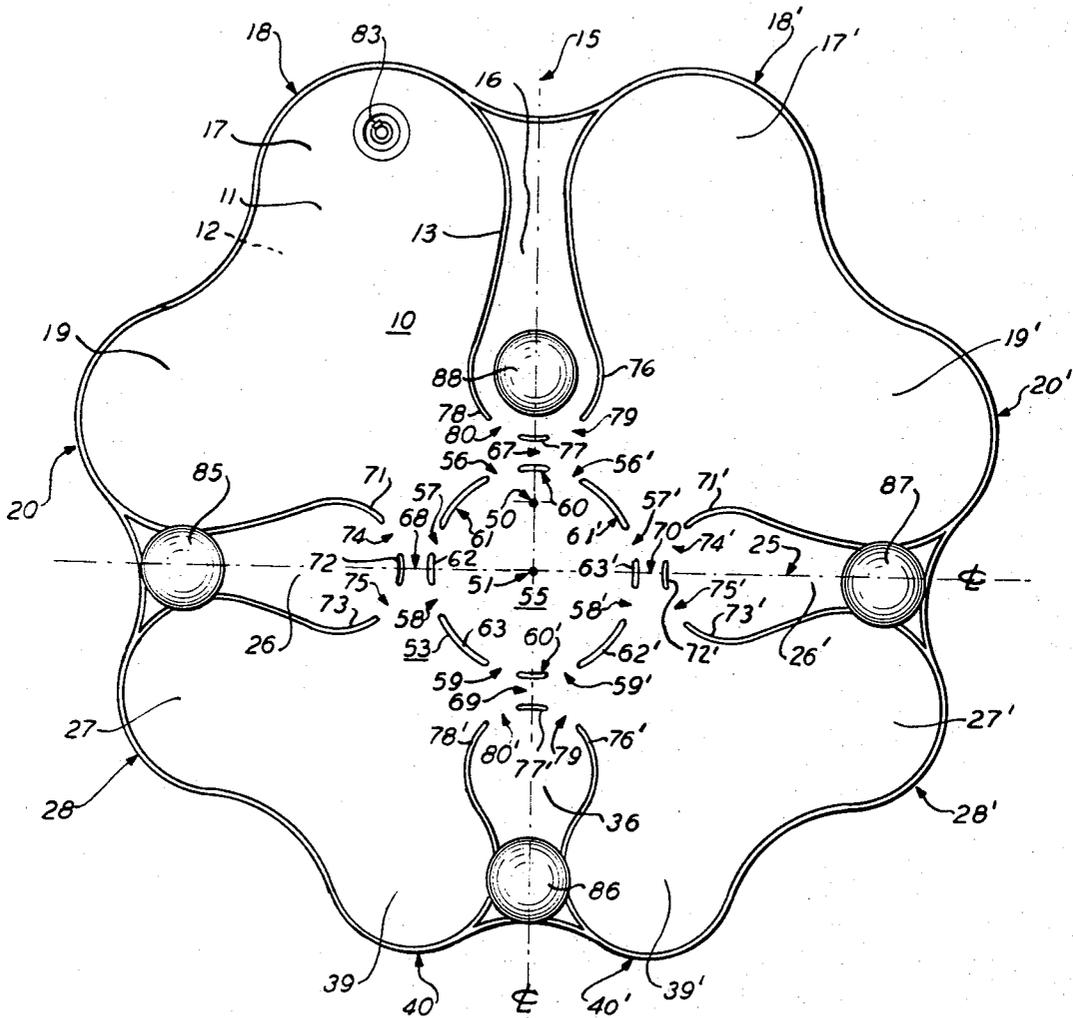
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INFLATED BATH OR BOUDOIR PILLOW

Filed April 7, 1967

2 Sheets-Sheet 1

FIG. 1



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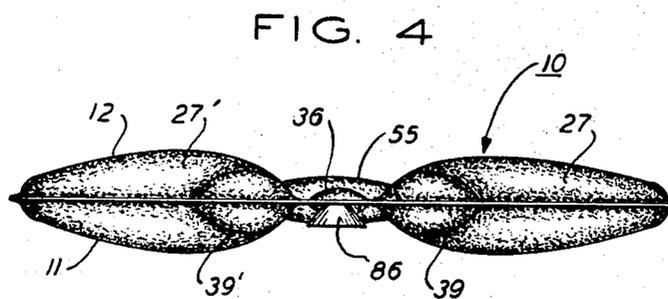
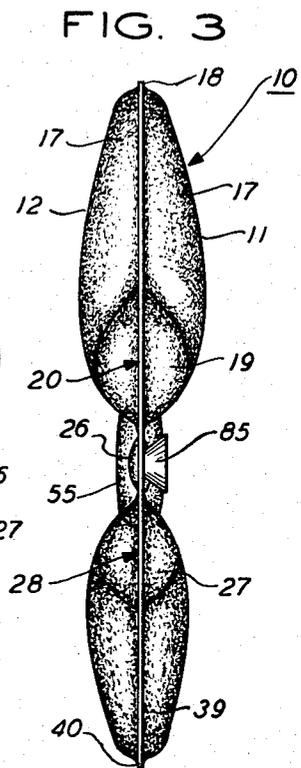
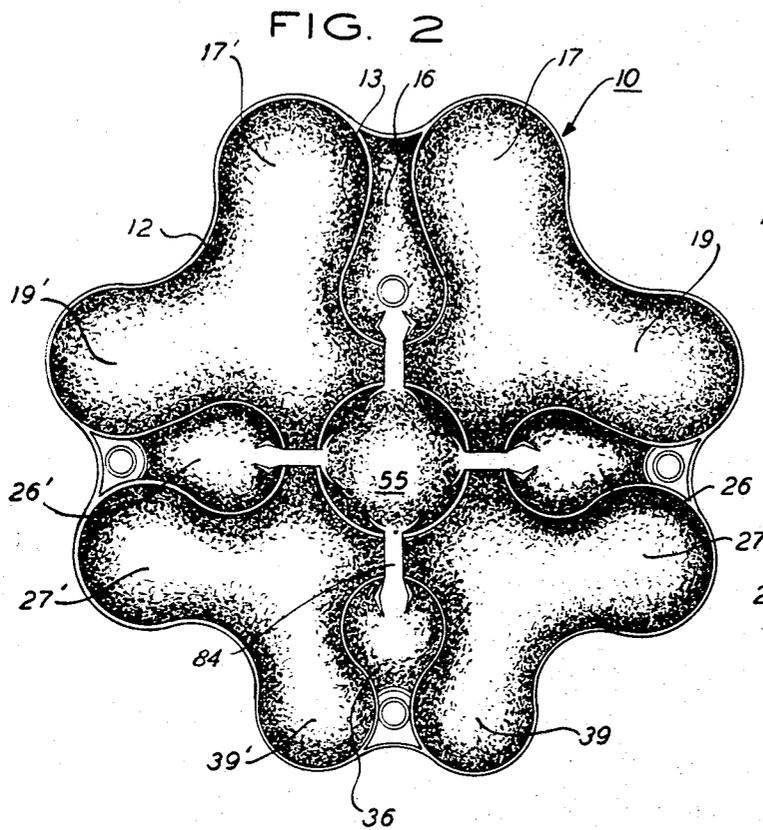
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INFLATED BATH OR BOUDOIR PILLOW

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2 Sheets-Sheet 2



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**INFLATED BATH OR BOUDOIR PILLOW**  
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## ABSTRACT OF THE DISCLOSURE

Inflated pillow substantially symmetrical about its vertical and horizontal center lines with circular and radiating lobes including the spacing of its circumcenter from juncture of center lines to provide a wedgelike cross section. Excess material relatively free of or without stress in the center area resulting from shortening of said periphery incident to inflation of lobes, and the location of interconnecting pneumatic passageways in said area.

The applicant has been active in the art of inflatable pillows including bath pillows for ten years as evidenced by the patents in the art issued to him. He does not know of any inflatable pillows circular in elevation with radiating lobes symmetrically indexed roundabout and relative to its center.

Inflatables represent an art distinct from stuffed pillows and have separate problems and design limitations due to, the distortion of flat sheets into bulbousness resulting from inflation, the stress of the hermetically sealed sheet especially adjacent to the seals, the inherent weakness and tendency to failure where seals terminate even for short distances to allow for interconnecting air passageways necessary for general inflation. Accordingly, it is a radical advancement in the art to provide areas of excess material and accordingly areas of little or no inflation of stress and said sheeting for the location of said passageways. The larger and more bulbous areas of the lobes produce the greatest stresses at points adjacent thereto. Such stresses are due not only to the air pressure of the original inflation, but also to pressure externally applied incident to use. These factors would not occur in stuffed pillows even though they were partially heat sealed instead of being sewed which latter is more conventional.

My circular and doubly symmetrical arrangement has distinct advantages because of the above factors, but also for the comfortable support of the head and shoulders and the location of the suction cups.

Objects of my invention and its inventive concept include the beneficial utilization of the above factors and unique characteristics of inflatables. Other objects and the successful accomplishment of them by unique means and design will be obvious from the following specification, claims and drawings in which:

FIG. 1 is a rear elevation of my invention before inflation,

FIG. 2 is a front elevation after inflation,

FIG. 3 is a side view of FIG. 2,

FIG. 4 is a bottom view of FIG. 2.

Shown in FIGURES 1 and 2 is an inflatable embodiment of my cushion 10 which is formed with a flat back sheet of vinyl 11 and a front sheet 12, hermetically heat sealed together between the slightly spaced double lines shown throughout the drawings similar to 13. These lines represent what is conventionally known as a bar seal. Uniquely all my seal lines are curved, none are straight. A concave seal defining a large lobe is the strongest shape and will carry maximum stress with less failure than a straight seal. Segments of which, later described, are shown only in FIGURE 1.

On either side of the upper part of the vertical hypothetical center line 15 is a narrow inflated area or valley

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16 and symmetrically arranged on either side thereof are two large bulbous or semispherical lobes 17 and 17' adjoined or paired with only slightly smaller but otherwise substantially similar bulbous sections 19-19'. 17 and 19 considered together are example of a bilobal arrangement.

A horizontal center line 25 crosses near the mid-section of center line 15 and on both sides and ends of center line 25 are relatively narrow inflated areas or valleys 26 and 26'. Bulbous areas 27 and 27' on the lower side of centerline 25 are substantially symmetrical with 19 and 19' but smaller.

On either side of the lower part of center line 15 is a narrow inflated area or valley 36. Bulbous sections 39 and 39' are symmetrical with reference to center line 15 and substantially similar to bulbous sections 27 and 27' but smaller. In summary, 17 and 17' are the largest, 39 and 39' are the smallest and 19-19', 27-27' are graduated in size therebetween.

It will be noted that extremities of arcs 18, 20, 28 and 40 and their counterparts 18', 20', 28' and 40' are adjacent or integral with a substantially circular periphery having its center at 50 whereas the vertical center line 15 and the horizontal center line 25 are normal to each other and cross at a point 51 which may be spaced somewhat below periphery center 50 on center line 15 which produces the graduated sizes of bulbous sections 17, 19, 27 and 29. This is due to the vertical spacing of centers 50 and 51. This uniquely gives a substantially circular pillow with contours radiating from its center a wedge shaped cross-section, thus providing extra strength and cushioning to support the head of the user while its lower parts take a minimum space in a location where space is at a premium because of the slope of the end of a conventional tub.

While I show an inflatable cushion having eight bulbous or lobular sections or four bilobular sections radiating toward a circular periphery and inscribable therein from a center which is substantially the center of said periphery, it is obvious that six or more sections, or three or more bilobular sections could be substituted without departure from my symmetrical arrangement or invention and likewise the spacing of centers 50 and 51 could be varied, likewise the center lines 15 and 25 could be diagonal instead of vertical and horizontal.

Radiating lobes 17, 19, 27, 29 and their symmetrical counterparts are positioned roundabout and substantially indexed relative to the center 50 as shown or optionally 51 or centers 50 and 51 if they coincide. All these variations are within the scope of my present invention and claims.

A bulbous center 55 centered at the juncture of center lines 15 and 25 is defined by circular seal 53, made up of segments 60, 61, 62, 63, 60', 61', 62' and 63' forming pneumatic air passages 56, 57, 58, 59, 56', 57', 58' and 59' therebetween respectively.

When cushion 10 is inflated through air valve 83, air passes freely through enough of the alternate passageways just described to inflate the bulbous and narrower inflated sections previously identified.

Upon inflation, sheeting 11 and 12 is stressed because while originally flat the sheets are distorted by air pressure, take on semispherical or cylindrical shapes, and the larger the diameter the greater is the stress. These stresses tend to concentrate at the seal which is also the weakest point of the sheet. When lobes such as 17, 19, 27 and 39 become bulbous, the circumference or periphery and accordingly the diameter of my pillow becomes shorter because the major cord of the uninflated lobes becomes half of the circumference of the inflated lobes. All this I have purposely incorporated in my plan and utilized

in my design and this results in an accumulation of excess sheeting material under only slight, minimum or no stress toward the central area of the pillow. The points of ultimate fracture and weakness in most inflatables usually occur where the bar seal is interrupted or deviated to allow for the entrance of air passageways such as 56, 57 or 80 if they occur where the sheeting material is under normal stress. Since my unique design concentrates excess material in its central area, I locate all interconnecting air passageways in that area thereby greatly increasing the durability of my product. I do not know of this ever having been done effectively before.

Although this area of excess or accumulated material is pneumatically interconnected with the inflated radial lobes and other inflated parts, and although pressures in a liquid or gas are, according to the laws of physics equally distributed in all directions, in my invention said area appears to be quite uninflated and certainly is unstressed by inflation in contradistinction to the radial lobes.

This central accumulation of excess sheeting is accentuated and possibly dependent on the fact that my lobes radiate from the center increasing in diameter as they extend toward the periphery.

Such excess generally results in unpredictable folding and creasing. I do not attempt to show this in the drawings because of unpredictable variation from pillow to pillow. For the first time, however, I have deliberately designed adjacent passageways and segments such as 56, 56', 60, 67, 77, 79 and 80 to tend to produce four symmetrical radiating shapes 84, FIG. 2.

I include in my meaning of circular, circumferential, circumperiphery, etc., any substantially oval variations which would react in much the same way.

Three suction cups 85, 86 and 87 are located near the periphery which would be the sides and bottom and most immersed portion of my bath pillow when in use, and one cup 88 is in the point of section 16 nearest the bulbous center 55 which would be the highest of all the cups when in use. When subject to buoyancy, cushion 10 naturally folds along its center lines until the bulbous sections contact. By placing suction cups near the periphery I avoid this. To allow bulbous sections 17 and 17' to extend upward above the rim of tub and because they are never submerged, and because 19 and 19' are held flat by cups 85 and 87, cup 88 is positioned closer to center 50 or can be omitted.

The most comfortable position for the nape area of the head is in valley 16 between 17 and 17' which usually brings the shoulders adjacent to valley areas 26 and 26' and the bottom of the cushion adjacent to the small of the back. This may vary somewhat with the position and size of the user and the depth of the tub.

As previously suggested variations are possible without departure from the essentials and scope of my invention, accordingly, I claim:

1. An inflatable pillow comprising a center, a plurality of inflated lobes radiating away from said center, a her-

metically sealed periphery substantially circular relative to said center substantially integral with at least part of the far ends of said radiating lobes, and an area apparently uninflated although pneumatically connected with said lobes spaced about said center adjacent to the inner ends of said lobes, due to a central concentration of excess material incident to the reduction in said periphery and accordingly the plane area of the pillow resulting largely from the inflation of said radically disposed lobes.

2. An inflatable pillow as set forth in claim 1, wherein said inflated lobes are bilobal.

3. An inflatable pillow as set forth in claim 1, wherein said radiating lobes are positioned relative to two center lines normal to each other and which intersect substantially at said center.

4. An inflatable pillow as set forth in claim 1, wherein said center is inflated.

5. An inflatable pillow as set forth in claim 1, wherein pneumatic interconnections between the inflated lobes are positioned in said area.

6. A hermetically sealed inflatable bath pillow, comprising a substantially circular periphery, a substantially centered center portion pertaining to said substantially circular periphery, a plurality of radial lobes each indexed relative to and positioned roundabout and away from said center portion with the larger ends of said lobes adjacent to said periphery, and a plurality of suction cups positioned between said lobes and attached to the back of said pillow, one of said cups being spaced much closer to said center portion while the other of said cups are positioned much closer to the portion of said periphery at the bottom and sides of the bath pillow when in use.

7. A bath pillow as set forth in claim 6, wherein said center portion pertaining to the substantially circular periphery is offset from a second center from which said lobes radiate thereby effecting more bulbous lobes on one side of said periphery than the other and accordingly giving said pillow a wedge-like cross section.

8. A bath pillow as set forth in claim 6, wherein said center portion is inflated.

9. A bath pillow as set forth in claim 6, wherein said lobes are inflated.

10. A bath pillow as set forth in claim 9, wherein said lobes are four in number and symmetrical on either side of a center line passing approximately through said center portion.

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U.S. Cl. X.R.

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