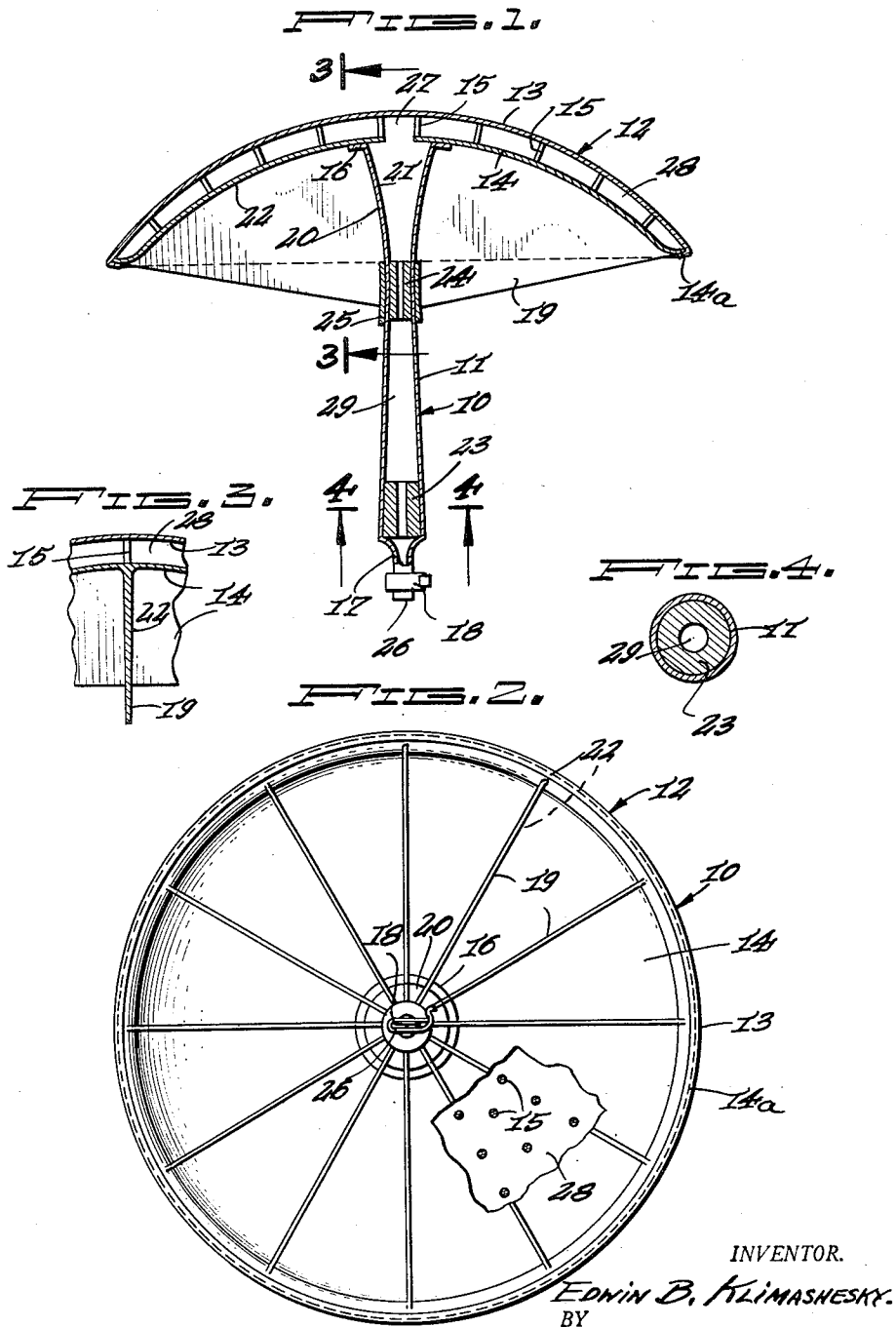


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RUBBER BALLOON UMBRELLA

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RUBBER BALLOON UMBRELLA

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This invention relates to umbrellas, and has for its main object to provide an umbrella made of flexible material, which, normally, may be folded into a small, compact position, but may be blown up by air or gas pressure when desired, into the well known shape of umbrellas, and used as usual.

Another object of this invention is to provide an inflatable umbrella of the character described, which may be folded in such a compact shape that it may be carried in a ladies handbag, or in a man's pocket, without undue discomfort.

Still a further object of this invention is to provide an umbrella of this type, which will have a novel style of reinforcements between its handle or staff, and the curved umbrella body proper, which reinforcements are easily folded into said compact shape, but which are strongly and reliably aiding and securing the inflated umbrella to retain its shape and to serve its purpose.

Still further objects of this invention will be apparent as the specification of the same proceeds, and, among others, I may mention: to provide an umbrella as indicated hereinbefore, which will be comparatively simple in construction, easy to manufacture, inexpensive, and in which the handle or staff, itself, will be made of flexible material, but will have means associated therewith whereby in an inflated condition, it will be adapted to serve its purpose.

In the drawing forming a part of this specification and accompanying the same,

Fig. 1 is a sectional view of the preferred embodiment of my novel balloon umbrella;

Fig. 2 is a bottom view thereof, a portion of the same being broken away;

Fig. 3 is a sectional view, the section being taken on the line 3—3 of Fig. 1, and

Fig. 4 is a cross sectional view, the section being taken on the line 4—4 of Fig. 1.

Referring now to the drawing more in detail by characters of reference, my novel umbrella is generally indicated by the numeral 10, and is mainly composed of two parts, the staff or handle 11, and the curved umbrella body proper 12.

In the preferred embodiment, my umbrella is practically entirely made of rubber, so as to be easily inflatable, and just as easily foldable when the air therein is relieved of its pressure.

The umbrella body proper 12 is the usual curved body, having the shape of a segment of a hollow sphere, but the wall thereof in the case of my invention, is double, having an outer wall 13, and an inner wall 14, which are secured together at their perimeters, as at 14a.

The two walls of the umbrella body proper 12 are spaced apart and collapsible and flexible stays 15 are arranged between them, which stays preferably may be made of rubber, and secured at their ends into the respective walls 13 and 14.

A hollow handle or staff 11 is provided with my novel umbrella, also preferably made of inflatable flexible material, like rubber, the upper end thereof being secured to the center of the umbrella body proper 12, as indicated at 16.

The lower end 17 may be narrowed and normally closed by a clamp device 18, said clamp device being of any standard construction well known in this art, and, normally, it would be employed so as to keep the pressure of the air or other gas, in the space in the umbrella body proper, and in the handle.

A plurality of reinforcing ribs 19 are employed between the upper part of the handle 11 and the inner wall 14 of the umbrella proper, which ribs may also be made of rubber, and will be arranged projecting radially, like spokes in a wheel, around the handle 11, their inner ends 20 being secured to the wall 21 in the upper part of the handle 11, while their outer ends 22 will be secured into the inner wall 14 of the umbrella body proper 12.

The securing of the rubber ribs or flaps 19, may again be done by any of the usual methods well known in this art.

Two stiffening and reinforcing tubular members 23 and 24 may also be inserted into the handle or staff 11, and an outer reinforcing rubber ring or sleeve 25 may be secured thereon at the place where the lower ends of the ribs 19 are secured thereto. This is to aid the upright and rigid position of the staff 11 when the umbrella is used, also to aid in the inflation operation and finally to aid in securing the ribs 19, and in folding or opening them in the right position.

The use and operation of my novel umbrella will be devised from the herein description, but I may remark that I may describe it as follows:

Normally the umbrella is in a deflected condition, the clamp 18 having been removed, all the possible air or gas pressed out during the obvious operation, of folding the rubber umbrella into a compact shape.

When it is desired to use the umbrella, the same will be unfolded, and air will be blown through the lower end 26 of the hollow staff or handle 11, whereby said handle will be slowly blown up into the shape shown in Fig. 1, and the air will further travel through the opening 27 into the space 28, then the umbrella body proper 12, and will inflate said body until it will take

up the usual globe segment shape indicated in Fig. 1, which automatically will cause the reinforcing ribs 19 to also open up and take up their spoke-like radial positions.

After the inflating to a desired degree, and when the whole device is in a comparatively rigid, stiff, position, the lower end 26 of the handle 11, will be closed and sealed by the strong clamp device 18, and the umbrella may be used.

When it is desired to deflate the umbrella, and fold, store, or carry it for later use, clamp 18 will be removed or opened up, thereby permitting the compressed air to leave the space 28 in the umbrella proper 12, and the space 29 in the handle, until only normal atmospheric air pressure will be left therein, whereupon the whole device may be folded in any judicious manner, so that the same may be in a compact shape, and the air between its parts permitted to exit through the open end 26.

While I have shown and described a preferred embodiment of my invention, I want it to be understood that changes and variations may be made in the details of construction, in the elements and their combinations, and I reserve my rights to make such changes and variations which are within the spirit of the specification and the scope of the claims hereunto appended.

What I claim as new and want to protect by Letters Patent of the United States, is:

1. A collapsible umbrella comprising a top and a staff, the top being constructed of an inner and outer wall of flexible air tight material, the outer edges of the walls being united together and the inner wall having a central air opening, the upper end of the staff being connected with the inner wall around said air opening, the staff being constructed of inflatable tubular and flexible material, the two walls forming when inflated the segment of a hollow sphere, the staff having an air opening, and means for closing said air opening.

2. A collapsible umbrella comprising a top and a staff, the top consisting of an inner and outer wall and the staff consisting of an inflatable tube of flexible rubber, the top being constructed of flexible air tight material and the outer marginal portions of the inner and outer walls being united to each other, the inner wall having a central air opening and the upper end of the staff being united to said inner wall around said opening, the staff being provided with a stiffening element intermediate of its upper and lower ends, said element having an air passage therein, the staff being connected to the inner wall by radial webs extending from said stiffening element, and a means closed air opening at the lower end of the staff.

3. A collapsible umbrella consisting of a top having inner and outer walls united to each other at their outer marginal edges and forming a segment of a hollow sphere, the center of the inner wall having an air opening and the two walls being connected by radial reinforcing means, and a hollow collapsible staff having its upper end united to the inner wall of the top around said opening, the staff being constructed of a single tubular body and being provided with a hollow reinforcing member intermediate of its upper and lower ends and the inner wall being provided with radial and collapsible webs connected at their inner ends to the staff, said webs being constructed of flexible material, the lower end of the staff being reinforced with a stiffening element having an air passage therethrough, said lower end of the staff having an air nipple through which air may be forced into the staff and the top to simultaneously inflate and deflate the top and staff, and means for closing said nipple to maintain the staff and top inflated.

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