A sun parasol or umbrella that is enhanced with cooling capabilities in the form of battery operated, mist dispensation, wherein the handle houses a battery operated pump mechanism and an internal water filled reservoir and water is pumped through the handle into a series of perforated tubes which are attached to the rods underneath the canopy, which distribute water over a user’s head, face and neck.
AIR CONDITIONED UMBRELLA

CLAIM OF PRIORITY

This patent application claims priority under 35 USC 119(e)(1) from U.S. Provisional Patent Application Ser. No. 62/013,878 filed Jun. 18, 2014, of common inventorship herewith entitled, “Air Conditioned Umbrella,” which is incorporated herein by reference as though the same were set forth in its entirety.

FIELD OF THE INVENTION

The present invention pertains to the field of umbrellas, and more specifically to the field of cooling umbrellas.

BACKGROUND OF THE INVENTION

The prior art has put forth several designs for cooling umbrellas. Among these are:

U.S. Pat. No. 7,412,984 to Terrence Michael Spencer and Nicolle Janine Spencer describes a portable personal shade and cooling device having a handle and a canopy. The handle defines a water reservoir connected to misting nozzles arranged around the periphery of the canopy. The handle incorporates a pressurization source which may be a gas containing cartridge, an external air pump or an integral air pump in the handle.

U.S. Patent 2008/0048051 to Hung-Jen Chang describes an exemplary misting umbrella that includes an umbrella housing an umbrella shank having a middle empty structure, a plurality of umbrella ribs having an irradiation shape disposed at a top end of the umbrella shank, an umbrella canopy covered the umbrella ribs, a pipe disposed in the umbrella shank, a nozzle disposed at the end of the pipe, and a joint disposed at one end of the umbrella shank far away from the nozzle. An hydraulic pressure unit uses high pressure to transport gas or mist to the pipe of the umbrella and to spray out of the nozzle. A switching valve controls the transporting of the gas or mist.

U.S. Pat. No. 6,886,759 to Andrew Okronick and Jeffrey Lewis describes a personal misting umbrella consisting of a water distribution tubing network that exists within the umbrella canopy. The placement within and attachment to the spreader and rib umbrella canopy support structure enables the canopy to be operated in an unhindered manner within its stored and unfurled configurations as required by the user. Upon connection of the water distribution tubing network to a source of pressurized water, such as a personalized container and air pump combination, the user selectively fills the canopy with a fine water mist, cooling the shaded area beneath the canopy through evaporative cooling.

U.S. Pat. No. 5,349,975 to Vinagda Valdner describes an air cooled umbrella having a rod, a handle with a handgrip, a top spring, a runner, a plurality of stretchers and a collapsible canopy. A plurality of flat ribs resides under the canopy. Each flat rib has a plurality of holes therethrough for venting hot air from under the canopy when opened. An electric fan is built into the rod directly under the canopy, so as to speed up the venting of the hot air and to supply cool air to a person under the canopy. The fan may have supplied power from a solar cell panel mounted on the canopy of the umbrella or alternatively from a separate rechargeable handle battery pack. The separate rechargeable handle battery pack is charged by either the solar cell panel or a separate house current wall socket charger assembly.

None of these prior art references describe the present invention.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a sun parasol or umbrella that is enhanced with cooling capabilities in the form of battery operated, mist dispensation.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an illustrative prototypical open tilted view of the present invention showing an On Off switch, a handle containing a battery run cooling system, and clear plastic cover material.

FIG. 2 is an illustrative prototypical open side view of the present invention showing fine open ducts or air holes and a columnar holding made with light PVC material.

FIG. 3 is an illustrative prototypical top down view of the present invention showing an umbrella frame made of PVC material.

DETAILED DESCRIPTION OF THE INVENTION

Warm spring and hot summer seasons make these seasons a perfect time of year to indulge in all manners of outdoor activities. From playing spirited sports games on city streets or splashing gleefully in a backyard pool to embarking on a camping adventure or languidly swaying in a porch swing, adults and children seek a myriad of ways to bask in these seasons' pleasantly balmy days and evenings. One of the most revered warm weather pastimes is visiting the closest beach. Whether people are seeking to master the rough tides on surfboards, swim in the warm salty waters or lie supine under the blazing summer sun, these tropical paradises attract millions of surf and sand aficionados every year. Another favored activity that brings people out of their homes in the spring and summer is attending sporting events. Afternoons spent at youth soccer matches, weekend forays to show support for a community baseball league, and entire Saturdays devoted to college football games and the requisite tailgate parties beforehand are all common, and extremely enjoyable, occurrences during this time of year.

When heading to the beach for the day or planning to spend an extended amount of time at a sporting event, consumers prepare for these jaunts by bringing along items that provide comfort while they are there. Lounge chairs and seat cushions are must have items for these types of outdoor activities as are coolers bursting with food and drink to provide refreshment. Many people take an umbrella to keep cool and protect themselves from the harmful rays of the sun or have an instant shield should rain suddenly appear. However, as practical and necessary as umbrellas are when spending time outdoors, their use does present a drawback. Particularly for sun and heat protection, most umbrellas are ineffective. Typically produced in darker colors, the canopies of these units tend to absorb heat more than deflect it. As such, many users may find themselves sweltering underneath an umbrella as if completely exposed to the sun. The intense heat of the day is still acutely felt around the face and neck. It is common to notice many hat wearing folks waving makeshift fans in front of their faces to cool themselves off while spending extended periods of time outside on hot days.
Please refer to the figures. The present invention, hereinafter referred to as The Air Conditioned Umbrella or The AC Umbrella, is a sun parasol or umbrella that is enhanced with cooling capabilities in the form of battery operated, mist dispensation. The AC Umbrella provides outdoor enthusiasts with a more effective shield against harmful and hot sun rays. The Air Conditioned Umbrella resembles a standard umbrella with a handled PVC handle rod 12 integrally attached to an expandable canopy 14.

Comprising ample diameter in size, the present invention is lightweight and manufactured primarily with a high strength, non woven, polypropylene based clear reflective fabric that reflects approximately ninety percent or more of radiant heat and UV penetration. Alternatively, the canopy comprises transparent vinyl or other plastic material.

Similar in function to traditional umbrella canopies, the interior of the Air Conditioned Umbrella canopy is held open by a series of expandable plastic PVC rods 16. These rods are collapsible and fold flat for storage.

The handle 18 of the present invention houses a battery operated pump mechanism 34 which works in conjunction with an internal reservoir 32 that is filled with water. The reservoir 32 and pump 34 are housed in the handle 18. This water is pumped through the handle 18 and handle rod 12 of the umbrella into a series of perforated tubes 22 which are attached to rods 16 underneath the canopy. Said perforated tubes are peppered with a multitude of spaced apart egress holes 24, which distribute misty water over a user’s head, face and neck. Tubes 22 and holes 24 are seen in FIG. 3. A handy control knob 26 provides adjustable setting of misting intervals when turned. A pressure switch 28, situated above handle 18 on handle rod 12 controls flow of the mist. Using this knob 26 and switch 28 allows stored water in the reservoir to last for an extended period of time.

One embodiment of the AC Umbrella is a handheld umbrella. A second embodiment of the present invention is smaller than the handheld umbrella and is produced as an accessory that is attachable to work helmets of anyone working in direct sunlight. A third embodiment of the present invention is manufactured in larger sizes to be used in conjunction with outdoor furniture.

A fully functional umbrella or parasol covering, the AC Umbrella ensures that excessive heat and burning ultraviolet sun rays are completely deflected away from a user. Incorporation of a cooling mist turns the present invention into a veritable portable air conditioner. Extremely easy to use, the AC umbrella is quickly opened, held or anchored in a matter of seconds. Perfect for use with outdoor activities, the present invention provides coverage for babies in baby strollers. Made of durable and high quality materials, the Air Conditioned Umbrella will withstand years of continued use.

Although this invention has been described with respect to specific embodiments, it is not intended to be limited thereto and various modifications which will become apparent to the person of ordinary skill in the art are intended to fall within the spirit and scope of the invention as described herein taken in conjunction with the accompanying drawings and the appended claims.

1. A sun parasol or umbrella that is enhanced with cooling capabilities in the form of battery operated, mist dispensation, comprising: a standard umbrella with a handled PVC handle rod integrally attached to an expandable canopy, wherein the interior of the canopy is held open by a series of expandable plastic PVC rods, further wherein the handle houses a battery operated pump mechanism and an internal water filled reservoir, wherein the water in the reservoir is capable of being pumped through the handle and handle rod into a series of perforated tubes which are attached to the rods underneath the canopy, further wherein the tubes comprise a multiplicity of spaced apart egress holes, which distribute water over a user’s head, face and neck.

2. The umbrella of claim 1, further comprising a control knob for setting misting intervals along with a pressure switch for controlling the flow of the mist.

3. The umbrella of claim 1, wherein the canopy comprises transparent vinyl or other plastic material.

4. The umbrella of claim 1, wherein the canopy comprises a high strength, non woven, polypropylene based clear reflective fabric that reflects approximately ninety percent or more of radiant heat and UV penetration.

5. The umbrella of claim 1, wherein the rods are collapsible and capable of folding flat for storage.

6. The umbrella of claim 2, wherein the canopy comprises transparent vinyl or other plastic material.

7. The umbrella of claim 2, wherein the canopy comprises a high strength, non woven, polypropylene based clear reflective fabric that reflects approximately ninety percent or more of radiant heat and UV penetration.

8. The umbrella of claim 2, wherein the rods are collapsible and capable of folding flat for storage.