INVENTION DISCLOSURE

Title: PowerBrella Portable Solar Power Umbrella

Inventor: Sven Goodsun
Director of Product Development
PowerBrella, LLC

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Summary:

We are developing a portable beach umbrella that includes solar panels. The solar panels allow a user to charge a cell phone, computer, or other 12V device, so that the user's day at the beach can be free from missed calls or a laptop that runs out of power. We are also developing a smaller umbrella for everyday use. We have partnered with Uni-Solar, a well-known and respected manufacturer in the field, to supply us with specially made solar panels for use in the umbrella, which we call the PowerBrella panels. All of our discussions with Uni-Solar took place under an agreement of confidentiality.

1.0 Background

Uni-Solar has been manufacturing portable solar modules under the Uni-Pac trademark for some time. (See attached pamphlet). Up until now, sales of the Uni-Pac have been primarily confined to military applications. The Uni-Pac includes a number of flexible solar panels that are mounted on a tear-resistance fabric and are extremely durable, as detailed in the pamphlet.

2.0 PowerBrella Panels

When we came up with the concept of mounting solar panels on an umbrella, we went to Uni-Solar and they agreed to produce a triangular, flexible solar panel, as shown

in the "Top of Beach Umbrella" drawing, which we call the PowerBrella Panel. We have two sizes of panels, one for the beach umbrella and one for the hand umbrella.

3.0 PowerBrella Beach Umbrella

We have included a drawing of the top of the beach umbrella. As you can see, the umbrella canopy is made of the same heavy fabric that the Uni-Pac solar panels use. You can also see the placement of the support ribs for the umbrella, the PowerBrella panels, and the fold lines for when the umbrella folds.

Turning to the drawing of the PowerBrella Pole, we can see the functional components of the PowerBrella. The bottom of the pole is a solid base for insertion into sand or grass. The stability bowl helps the PowerBrella to stay vertical. The batteries are located inside the PowerBrella in a battery compartment. The top of the battery compartment is sealed with a threaded portion to make it waterproof.

Also, the PowerBrella pole separates into a top section and a bottom section using the threaded connection. An electrical wire runs from the batteries up the middle of the threaded connection and plugs into a plug from the top section.

At the top of the PowerBrella, wires from the solar panels enter the top of the pole and are connected to the power control system. The power control system includes a monitor that monitors the charge in the batteries to prevent overcharging. It also includes bypass diodes to allow the system to maintain charging when not all of the solar panels are exposed to the sun.

The power control system includes charge indicator LEDs that indicate when the batteries currently have power and also indicate when the batteries are successfully charging. Power is provided to an external device using a USB port or a D/C output port that outputs 12V power. As you know, 12V power is used to power most cell phone rechargers and laptop computers. The USB port can be used to power several devices like some MP3 players and more devices that are beginning to use USB ports.

Also, with our power control system, you can plug in a D/C input to the D/C input/output port in order to pre-charge the batteries before you hit the beach. The charging cord is a standard charging cord that is used to charge many cell phones and can be plugged into a wall outlet. Additionally, if you forget when you are still at home and

want to charge the PowerBrella on the way to the beach, we sell an adapter that you can plug into your car's cigarette lighter that can be user to pre-charge the batteries.

Another idea that we had was to mount a mesh bag on the pole so you can put your keys and cell phone in the mesh bag to keep them out of the sand. We also had the idea that instead of just having ports for USB and D/C output, we should have USB and D/C wires that extend all the way to the ground so that you can plug in your cell phone and lay it on the ground. To be honest, we are not sure if we are going to sell the PowerBrella with just the ports or with the integrated leads, but we want to keep our options open. If we sell the PowerBrella with the integrated leads, we would probably include some type of cord holder to wrap the cords to keep them stationary during transportation.

Another idea that we had was to put the outputs for the USB and D/C ports closer to the ground on the assumption that the user is using the PowerBrella while sitting on the ground.

We were also thinking of offering a model with a one-piece pole instead of a top section and a bottom section.

4.0 PowerBrella Hand Umbrella

The hand umbrella is pretty similar to the beach umbrella, but it is designed to be carried by hand like a standard rain umbrella. To that end, we use batteries of a smaller diameter and the umbrella pole is one piece instead of two. Also, the solar panels that are user are smaller and instead of a turnlock we use the standard pushbutton lock to keep the canopy extended.

5.0 Integrated Time/Temperature/Humidity Sensors

Another idea that we had was to include a digital readout for the time, temperature and humidity. For the temperature and humidity, there could be either a constant display or a display when a user presses a button. However, with the time display, the PowerBrella would have to be charged before the time could be loaded into memory. However, both loading the correct time and providing some initial power to the

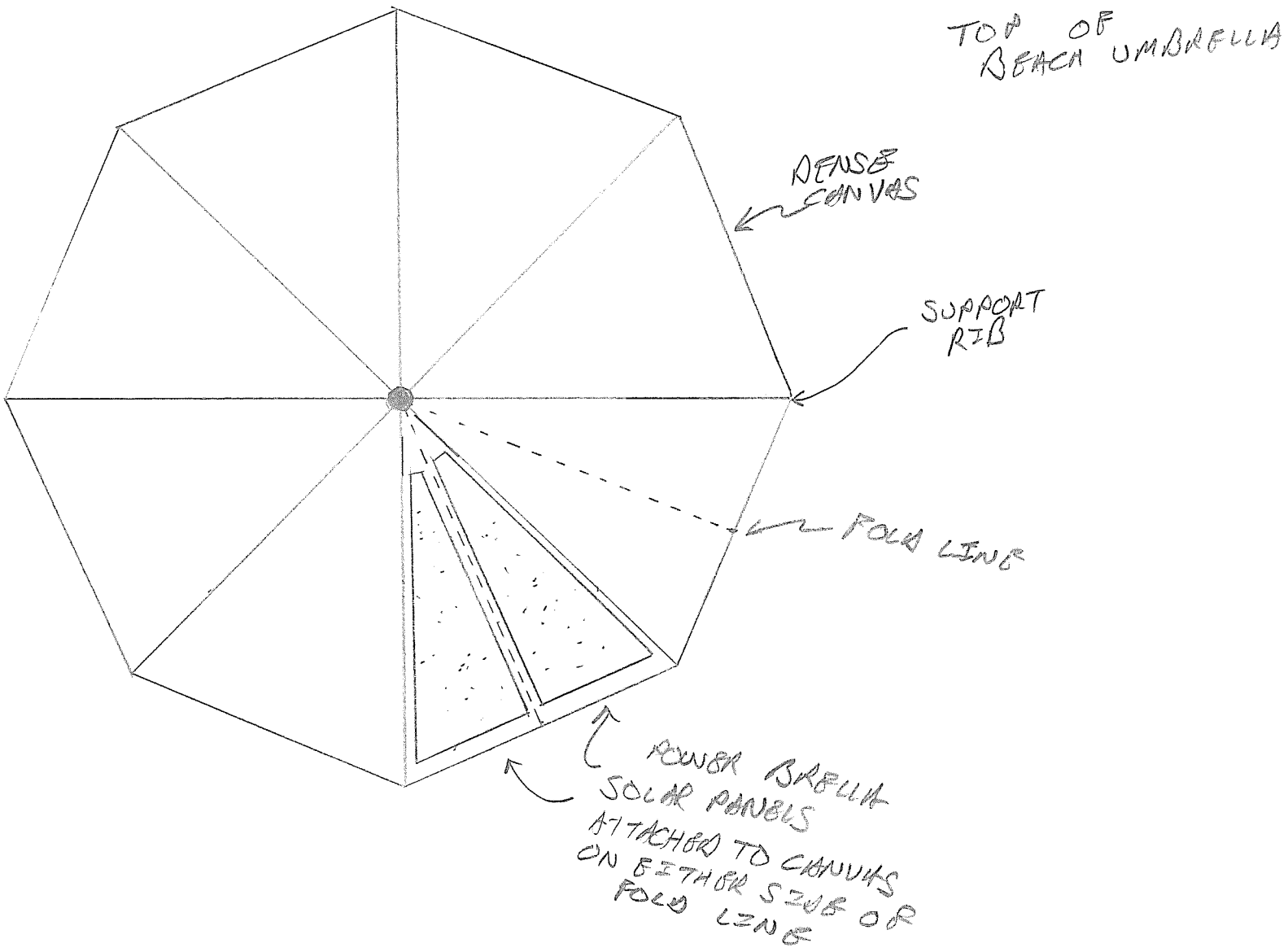
PowerBrella can be done by plugging the PowerBrella into a computer using the USB port.

6.0 Integrated MP3 Player

Another idea that we had was to build an MP3 player right into the PowerBrella. The MP3 player can be loaded with songs using the USB port. We would also include the basic controls on the pole to let users skip songs, adjust volume, etc. There are also available headphones with the built-in controls.

7.0 Other Patented Solar Umbrellas

The CEO passed on your recommendation to search the PTO's website, so I did. I found the two patents that are attached: US 6,923,194 B2 and US 2006/0005869 A1. Both of these patents are for solar umbrellas and they look pretty close to what we came up with. However, the CEO says that you are the best patent attorney around and that you will be able to find a way to get us our patent without infringing on these other two patents.


TOP OF BEACH UMBRELLA
DENSE CANVAS
SUPPORT RIB
FOLD LINE
POWER UMBRELLA
SOLAR PANELS
ATTACHED TO CANVAS
ON EITHER SIDE OF
FOLD LINE

POWER BRELLA POLE