

TITLE

Patent Application of Scott Rauvers (www.ez3dbiz.com) for Portable Stove with Silent Electric Power Generator

BACKGROUND OF THE INVENTION

1. Field of the Invention:

This invention relates to the field of independent electrical power generation. More specifically the invention comprises a lightweight portable stove and power generating unit, both of which are detachable from each other, allowing for easy storage and/or transport.

2. Description of the Related Art:

Recently there have been a flood of new inventions utilizing TEC's, which utilize the Seebeck Effect to generate electricity. The majority of these generate low amounts of D.C. electricity and require D.C. step up boosters to boost the power output enough to charge IPOD's and other 5 volt or more portable conveniences. Some of these incorporate methods to cook food while electricity is generated. In recent years advances in wearable and portable technology are allowing users to use these devices in remote wilderness areas or during emergency situations. Some of these electrical conveniences used in these operating environments include GPS devices, IPOD's and small heaters. This improved version is capable of charging GPS, IPOD's, or activating small 5 volt micro heaters, and utilizes multiple TEC's wired in series to generate substantially more D.C. voltage than current versions on the market today, while at the same time giving the user the ability to use the unit as a portable lightweight weather resistant stove to heat food or water. Due to the higher D.C. voltage produced, it has the added advantage of charging rechargeable batteries in less time than those currently on the market today. It can also power portable conveniences such as 5 volt micro heaters, bright light LED bulbs and small electric motors.

BRIEF SUMMARY OF THE PRESENT INVENTION

The present invention comprises a 2 part system composed of a portable lightweight stove in the lower portion and a power generating unit generating D.C. electricity in the upper portion. The upper portion is a heat resistant 1 gallon can made of tin of which are attached 24 TEC's wired in series. This new technology of wiring TEC's in series mounted upon the vertically erected surface of a heatproof metallic can will hereby be referred to as the "Peltier Tower" in this patent.

Power is generated by 24 TEC's wired in series upon which this power can be stored in one or more 2.7 volt detachable super capacitors which are located on both sides of the Peltier Tower, allowing the stored power to be easily detached from the upper portion of the device and transported or wired in series with similarly charged 2.7 volt super capacitors to step up the D.C. voltage.

To facilitate quick and convenient transport, the invention includes a handle, allowing the user to transport the device to a desired location where heat or electrical power is desired.

The detachable lower portion generates smoke free heat via 2 smokeless oil burning lamps, which generate enough heat to heat water or heat food.

The amount of D.C. voltage generated by the top portion of the device when the temperature outdoors is approximately 75 degrees is approximately 8 volts D.C. when medium heat is applied and 15 volts or more D.C. when high heat is applied and up to 5 volts extra during cool weather. This extra voltage is due to an increased temperature difference between the hot and cold sides of the thermoelectric elements caused by the Seebeck Effect. This voltage is conveniently available for viewing on a weatherproof digital LED display.

BRIEF DESCRIPTION OF THE DRAWINGS

The portable device for charging one or more 2.7 volt super capacitors, powering an electrical load or micro heating element according to the present invention will hereby be discussed in this patent document. These drawings will present a way of illustrating the invention and are not to be construed as being limiting to other possible embodiments falling within the scope of the attached claim set.

The portable / detachable device for charging one or more 2.7 volt super capacitors, and other rechargeable gadgets or loads therein according to the present invention mentioned in this patent will hereby be presented in extra detail with regards to the accompanying drawings. These drawings will clearly show the method for implementing the herein described invention and shall not be construed as being limited to other possible embodiments that fall within the scope of the set of drawings herein attached.

FIG. 1 is an overall view of the device with both the top and base portions attached to each other allowing easy transport.

FIG. 2 is a perspective view showing the top portion, also called the Peltier Tower. It shows a portable device according to the present invention composed of an upper layer as detached from the bottom layer.

The top portion of the device is capable of being heated by a source of open flame whose heat is emitted upward so that the thermoelectric effect supplies charge to at least one or more 2.7 volt super capacitors or to charge portable rechargeable electrical conveniences.

FIG. 3 is a perspective view showing the bottom portion of the present invention and is hereby referred to as "The Stove" in this patent document . It shows a portable device according to the invention composed of a lower portion detached from the top portion. The interior of the bottom portion contains 2 smokeless oil burning lamps sufficient to generate adequate heat to heat water or heat food.

REFERENCE NUMERALS IN THE DRAWINGS

10 - Portable Stove with Silent Electric Power Generator

Insert additional numbers incorporated into the drawings in this space example:

10 – Oil Burning Lamps

12 – Wing Nut

14 – Detachable Baseboard on lower portion

DETAILED DESCRIPTION OF THE INVENTION

The present invention relates to a portable device that is composed of two parts which are detachable/removable from one another. The top portion, also called the Peliter Tower, acts as a lightweight portable power supply capable of charging IPODS, Batteries, powering five volt micro heating units and other portable conveniences. The bottom portion of said invention utilizes an adjustable open flame whose heat can be used to heat water or heat or fry eggs.

The problems associated with batteries used in portable conveniences are that they add to the overall weight of the device, take time to charge, and are an environmental hazard. This device is lightweight and its considerable voltage quickly charges portable devices.

Said device can also be used to store generated power in the two detachable 2.7 volt super capacitors which can be detached and used to power electrical devices such as 5 volt mini micro heaters, motorized fans, GPS, IPODS and other portable conveniences.

In situations where lamp fuel is not available, the base of the device can be detached from the Peltier Tower thus allowing the Peltier Tower to generate electricity from other heat sources. This heat source can be from propane gas stoves, open campfires, hot coals a magnifying lens or similar sources of heat.

When two charged 2.7 volt super capacitors are wired in series, they can also be used to directly power small five volt micro heating elements used to heat sleeping bags, battery heated socks, heated gloves, and other clothing.

Background of the Invention

Lots of people enjoy the great outdoors and a few enjoy extreme outdoor conditions, such as in training routines for wilderness survival or rescue. During periods when the weather is wet, snowy or there is limited light, enjoyment of the outdoors can be further enhanced when the experiencer has access to heat and a reliable/portable power supply that operates without sunlight or wind and has a low power consumption and the ability to store generated voltage for future use. This allows the user to heat food, read by light and power electrical devices.

Portable rechargeable units on the market today that rely on solar and/or wind to generate electricity, must always have these weather conditions available to charge or power electrical loads. This problem is further exasperated when local electrical sources are unavailable to re-charge batteries or gasoline or kerosene is unavailable when used in gasoline generators which is common in some remote locations. Batteries are cumbersome and heavy, take a long time to charge, and are an environmental hazard.

An additional drawback to reliance on chargers is that they rely on sunlight. These solar type chargers lose their effectiveness during overcast days, especially during winter and generate no power during night time or severe stormy weather. This new and improved is suited for cooler weather, due to the temperature difference, which enhances the Seebeck Effect.

Super capacitors charge rapidly, are lightweight and can be charged thousands of times compared to conventional batteries.

This device has a dual purpose. It can generate electricity, or heat food and the only required fuel to do so is a source of heat. This device also has the added advantage of being silent and weatherproof.

The power to produce electric current comes from 2 smokeless oil burning lamps positioned at the base of the device whose heat enters a vertically mounted metal one gallon heat resistant tin can with an open base; thus providing a self-sufficient portable power generation device and power storage unit that is reliable in any weather condition and is lightweight and portable.

Gasoline powered electric generators are heavy, cumbersome, loud, noisy and produce soot and carbon emissions. Hence an improved power generating device that is silent, clean, efficient and operates day and night and in any weather extreme would be advantageous, and most of all in particular much more efficient and reliable with no sensitive, delicate or sophisticated confusing circuitry, would be highly advantageous and meet the demand for device that can generate electrical or stored electrical energy in any environment.

Long Term Durability

Super capacitors also have the ability to be charged hundreds of thousands of times, compared to regular NiCad batteries, which lose their charge after consecutive charging. TEC's also have a lifespan of 20 years or more making them especially suited for individuals who want to invest in a long term device that has durability over the long term.

Potential for use as a Bicycle Pedal Assist Device

If the output of the electrical energy generated from the Peltier Tower or a fully charged 2.7 volt super capacitor is attached to a small electric bicycle motor, it can greatly assist in the turning of the rear wheel of a bicycle.

Use as a heat and light source

Thus said device has the ability to produce 2 forms of heat and 3 forms of light.

The first method of heat generation is by extracting the power from detachable charged 2.7 volt super capacitors to power a 5 volt micro heating element to warm gloves, socks or clothing. This can be achieved by wiring together two of the 2.7 volt super capacitors in series.

The second form of heat generation comes from the two smokeless oil burning lamps located on the bottom portion of the device. When these are accessed by detaching the Peltier Tower and lighting them, their exposed flame(s) can be used for both light and heat.

To use the device for light, both smokeless oil burning lamps may be lifted out from the lower portion by pulling horizontally 2 metal pin clips positioned opposite other on the sides of the base of The Stove. This removes the base of the lower portion. After lifting the lower portion from its base, it allows for easy access to the two smokeless oil burning lamps. These lamps may then be lifted out and positioned in a location where light is desired.

The second method of generating light is by plugging a LED or light bulb directly into the charged 2.7 volt super capacitor.

The third method of generating light is to plug an LED or light bulb directly from the D.C. output power supplied by the Peliter Tower.

Object of the Invention

It is an object of this present invention to provide a sturdy, compact, portable device having the potential to convert heat into electrical energy through the Seebeck Effect and said device be controlled by a user wherein the energy produced is put to use to charge at least one or more 2.7 volt super capacitors or portable rechargeable electrical conveniences.

Another object of said invention is to provide a lightweight portable device capable of using thermoelectric elements wired in series also known as the thermoelectric effect or Seebeck Effect to give electrical charge to at least one or more rechargeable batteries or supply power to mild electrical loads such as five volt micro heating elements, drills or electrical fans for cooling during hot weather etc.

Preferably said portable device according to the description mentioned herein of this invention, if adapted for recreation or bicycle touring when the means for a pedal assist is preferred or sought.

It is a further object of the aforementioned invention to provide an alternate to the aforementioned invention, it also holds potential as a portable and clean, quiet method for charging portable conveniences and as a lightweight portable power supply adapted for extreme, polar weather or space environments due to its smoke free and quiet operation, that solves the above mentioned problems of the prior art.

Summary of the Invention

Herein the above described object as well as several other mentioned objects are hereby presented with the intention to be obtained in a first aspect of the invention by making available to an effective self-sustained grid free lightweight durable portable power supply to charge one or more 2.7 volt super capacitors and having the capability to act as an all-weather portable electrical generator and heater.

One aspect of this invention is to provide a means of supplying power to at least one electric motor and or charging one or more 2.7 volt super capacitors or batteries or portable conveniences.

Wherein said portable device is composed of one or more thermoelectric elements containing a cold side and a warm or hot side, which have attached to their cool side a heat sink used for creating a temperature difference. These thermoelectric elements are therein attached to the exterior of a vertically erected rectangular heat resistant tin box with exposed open base, and held in place with flat metal strapping, also known as plumber's tape, wherein contained in the base portion are 2 smokeless oil burning lamps, from which heat produces electricity utilizing the Seebeck Effect.

Another aspect of this invention is to provide a unit that quickly and easily detaches itself from a bicycle rear rack or front basket, allowing for prevention of theft when used as an pedal assist on bicycles.

Said device has been designed to produce electricity without the need for constant sunlight or wind, allowing the user to have independent lightweight portable power generation on demand in any weather environment. It also allows the user an economical smoke free method to heat food or heat water.

Electricity of said device is D.C. voltage, and this voltage is generated by the gradual warming of the exterior surface of the Peltier Tower. As the temperature increases from the two smokeless oil burning lamps positioned below, it causes the heat molecules to vibrate on the hot side of a thermoelectric element which is attached to the surface of the Peltier Tower. D.C. electricity is then produced from the temperature difference obtained between the cold side and the hot side of the thermoelectric element. The cooler the outdoor temperature, the more D.C. electricity is generated, as the Seebeck Effect increases the more the temperature extreme increases between the two sides of a thermoelectric element.

The output of the D.C. generated electricity is than put to use to charge one or more 2.7 volt super capacitors. When said device is not charging 2.7 volt super capacitors, the direct D.C. output power can be used to charge portable rechargeable batteries, power electrical loads and other electrical uses where grid provided power is not available or accessible. Examples of personal conveniences that can be powered or charged by said device include: Laptops, GPS units, CD players, IPODS and the like.

Due to the medium D.C. voltage output produced by the series wired thermoelectric elements, this device has the capability of providing rapid charging of cell phones, GPS devices and other electrical devices that are necessary for safety and navigation while in remote regions, especially during weather extremes, when power is in most demand.

The drawback and weakness of thermoelectric elements is they suffer from overheating due to being exposed to open flames of varying heat and intensity. Similar thermoelectric charging inventions incorporating thermoelectric elements as power generating devices use heat sensing electronics to switch off the thermoelectric element(s) or an audible signal indicating that the thermoelectric element(s) are overheating.

One of the notable engineering breakthroughs in this new and improved thermoelectric clement charging device is its ability to dissipate the heat generated from the two smokeless oil burning lamps by distributing it evenly over a wide surface area. This is achieved by utilizing a large open base and distributing the heat evenly throughout the Peltier Tower as the heat rises and circulates pockets of micro currents of air generated inside the Peltier Tower by the two smokeless oil burning lamps. This new heat distribution method dramatically increases the lifespan and reliability of the thermoelectric elements.

An additional thermoelectric element cooling mechanism incorporated into this device utilizes the use of copper heat sinks the same size as the thermoelectric elements, which are mounted on the cool side of each thermoelectric element, which further dissipate the buildup of heat on the thermoelectric elements.

One drawback to incorporating this new innovative heat dissipation system into the device is it produces a lower overall output voltage. However this problem has been overcome by wiring a large number of thermoelectric elements together in series. Overall, this successful heat dissipation system has solved the problem of thermo electric "burnout", which has been a major engineering problem for many inventors trying to generate long term dependable electricity for a long period of time by utilizing thermoelectric elements in their designs when building charging units.

Weather Proof

Thermoelectric elements and super capacitors are weather proof and water resistant, allowing them to operate fully when exposed to environmental extremes. This devices utilizing said components will function even if it is accidentally submerged underwater for a short period. One only need to wait for the drying of the oil lamp wicks before restarting the device again.

The individual aspects shown in this invention may each be combined with the aforementioned aspects. These aforementioned aspects of said invention will be apparent from the following description with reference to the here described embodiments and enclosed details and said drawings

Detailed Description of the Embodiments

Fig 1. Shows an exploded view of the device

Fig 2. Shows a top view of the bottom portion of the device

Fig 1 named the Peltier Tower, shows the top portion of an overall detachable, removable device according to the work described as a such in this patent.

Fig 2 shows the upper portion of the device consisting of at least one thermoelectric element 12, one heat sink 14 and metal plumber's tape 16 designed to secure the thermoelectric elements 12 and copper heat sinks 14 to the sides of a heat resistant portable tin can 18.

Fig 2 shows the bottom portion of an overall detachable, removable device according to the work described as such in this patent. This portion is used as a lightweight detachable stove 20 used to heat food or heat water.

Said thermoelectric elements 12 are wired in series whose output consists of one or more 2.7 volt super capacitors 22.

Said thermoelectric elements 12 are composed of having one hot or warm side mounted on the outside surface of the Peltier Tower 18 and one cold side of which is attached one copper heat sink 14 of the same length and width as the thermoelectric element 12. Positioned over the top portion of said heat sinks 14 is a strip of metal plumber's tape 16 which securely holds the thermoelectric elements 12 to the exterior surface of the Peltier Tower 18.

Heat to power the thermoelectric elements 12 is provided by two smokeless oil burning lamps 24 which are mounted below the Peliter Tower 18 in the lower portion 20 and a visual indicator of generated D.C. voltage is conveniently displayed on a weatherproof digital LED volt meter 26. To reduce wear and tear on the digital LED volt meter 26 an on/off switch 28 mounted on the instrument panel 32 can be used to turn the visual display of the LED volt meter 26 off.

The outlet power generated by the thermoelectric elements 12 wired in series can be accessed by one positive 34 and one negative wire 36, exiting the thermoelectric element. This connection is connected by a second on/off switch 38 mounted on the control panel 32, to block access to power when recharging the items is not necessary.

The one positive 34 and one negative wire 36 contain the voltage generated by the thermoelectric elements 12 wired in series. These are connected to one male 40 and one female plug 42 which are detached from one another when the Peltier Tower 18 is disconnected from the stove 20. Detachment of the Peltier Tower 18 is achieved by unscrewing four wing nuts 44, of whose bolts are mounted through the upper bottom portion of the stove 20 as shown in Fig 1.

Access to the interior of the stove 20 is obtained by removing the solid wood base 46 by pulling on two metal pull clips 52. The interior frame structure of the stove 20 is composed of an upside down laminated wire dish rack 48 whose body is secured with two metal pull clips 52, as shown in Fig 2. These metal pull clips 52 are positioned at opposite ends of each other of the solid wood base 46 and overlap the overturned laminated wire dish rack 48, securing the stove 20 to the wood base 46.

The sole purpose of the metal pull clips 52 is to detach the stove 20 from the wood base 46 of the lower portion and obtain access to the interior of the lower portion housing the stove 20. By obtaining access to the inside of the stove 20, the two smokeless oil burning lamps 24 may be refueled, adjusted, calibrated or replaced.

An additional advantage of detaching the top portion 18 from the lower portion 20, is to allow electricity to be generated when the Peltier Tower 18 is placed over an open fire, propane gas stove or other source of open heat to charge the 2.7 volt super capacitors 22, allowing for quick, convenient access to stored power. It also serves an added purpose by allowing the Peltier Tower 18 to fit snugly into a backpack or large briefcase for secure convenient transport or long term weather proof storage.

The sides of the outer portion of the stove 20 of said device are composed of horizontally mounted foam board swinging doors 54, designed to reduce sudden wind gusts from extinguishing the flames provided by the two smokeless oil burning lamps 24.

The top portion of the device 18, hereby called the Peltier Tower 18, is composed of a heat resistant one gallon solid rectangular metallic tin can mounted vertically, and has its base removed, allowing for an exposed opening 56. Attached to the lower portion of the Peltier Tower 18 are two solid metal L brackets 58 which have two holes per bracket 60 located at 45 degrees to each other 60, through which bolts 65 and nuts 68 are affixed to the inside and outside of the lower portion of the Peltier Tower 18.

The remaining two holes of the base of the L bracket 72 are mounted flush horizontally to a flat galvanized metal face plate sheet 74 connected to the exterior top roof of the stove 20.

Attached through the base of the metal face sheet 74 aligned with the horizontally mounted L bracket 58 is a vertically protruding bolt 64 that goes through the base of the metal face sheet 74 and is secured with a nut 68.

The base portion of the metal L angle bracket 58 that connects with the metal base/face plate sheet 74 is composed of two wing nuts 44 on each side, making the top portion (Peltier Tower) 18 detachable from the bottom portion (stove) 20. This allows for the stored power in the 2.7 volt super capacitors 14 to remain attached to the Peltier Tower 18 and reduces the weight necessary when said device is needed to be transported over long distances.

Said super capacitors 22 are mounted to the side of the Peltier Tower 18 by a conduit coupling 78, which is secured by a bolt 80 and nut 82 through a hole in the plumber's metal tape 16, which is wrapped around the Peltier Tower 18.

The plumber's tape wrapped around the Peltier Tower is secured with a bolt 82 and a nut 84, preventing the assembly from slippage.

This flat metal sheet 72 which mounts horizontally flush with the base of the Peltier Tower 18 contains at its base center a horizontally open rectangular hole 55, that aligns with the base of the Peltier Tower 18. This allows heat to enter the interior of the Peltier Tower 18 and heat the series wired thermoelectric elements 12, attached to the exterior of the Peltier Tower 18, which then provides D.C. Voltage electricity.

To attach the stove 20 to the Peltier Tower 18, the Peltier Tower 18 is placed over the base portion of the device 18 aligning the base bolt(s) 65 protruding through the metal face sheet 74 with the open holes of the metal L angle bracket 58, and hence securing it with a wing nut 44.

Attached to the underside of this galvanized flat metal sheet 74 is a flat piece of wood 86 measuring 3 inches in length and 1 foot in width.

Another piece of wood of the same size and width is mounted at the opposite end of the laminated wire dish rack 48, thus allowing for a flat and secure mounting of the galvanized metal face sheet 74.

Said positioned wood sheet 86 is sandwiched in-between the laminated wire dishwasher rack 48 placed face down upon the wood base 20 which is held in place with the two metal pull pin clips 52 and secured to the base of the stove 46 on opposite sides of each other.

The laminated wire frame of the upside down dish rack 48 provides a lightweight sturdy, rustproof enclosure for the two smokeless oil burning lamps 24 and also serves as an exterior frame for the two foam board doors 54 mounted at opposite sides of each other.

This laminated wire frame dish rack 48 also acts as solid frame for mounting the instrument panel 32 displaying the digital LED voltage gauge and on/off switches 28, 38.

The foam board side doors 54 of the stove 20 are held securely closed by a flat circular neodymium button magnet 88.

This flat circular neodymium button magnet 88 is attached to the far end of the foam side door 54 closest to the front instrument panel 32.

To secure the foam board door by using the flat neodymium magnet 88, a thin flat metallic wire ruler strip 92 is mounted horizontally on the upper portion of the interior of the dish rack 48, and held in place with two screws 94 which protrude through the flat three inch wood sheets 86 which are positioned between the flat metal sheet 74 and dishwasher rack 48.

Two flat metal hinges 96 mounted at the far end of each foam board door 54, opposite the instrument panel 32 on the lower portion of the device 20 secure the foam board doors 54 with screws 116 to the rear foam board plate 102 at the rear of the lower portion 20 of the stove.

By opening the foam board door 54 the user of the stove 20 can turn the knob of the smokeless oil burning lamp 24 to adjust flame height or control airflow to the smokeless oil burning lamp 24 to reduce or increase wind flow allowing for a stable burning flame.

The rear of the stove 20 consists of a single piece of foam board 102 of the same height and width as the foam board swinging doors 54.

The instrument panel 32 is attached to the front of the device by mounting a single piece of wood 104 measuring one inch in height and one foot in length between the laminated wire frame upside down dish rack 48 and a piece of galvanized tin sheet 106 measuring eight inches in height and one foot in length.

To close and secure both ends, six screws 108 are positioned through drilled holes through the single piece of wood 104 and galvanized tin sheet 106.

This same configuration is used to secure the rear foamboard 102 located at the rear of the stove 20 by positioning six screws 112 through which are attached two pieces of wood 114 measuring one inch width by one foot in length.

CLAIMS

What is claimed is 1. A portable device that supplies power to at least one 2.7 volt super capacitor. Said device is composed of at least 24 thermoelectric elements wired in series, with the thermoelectric elements composed of a cool side and a hot or warm side respectively.

What is claimed is 2. A lightweight portable device using two smokeless oil burning lamps to heat water or heat food.

Wherein the top portion of the device, also called the Peltier Tower is manually heated via 2 smokeless oil burning lamps and can be detached from the lower portion to accept heat from a portable gas burner, stove or open campfire, and wherein said weather proof device comprises a 12 volt digital LED voltage reading display showing available current applicable when device has warmed and is producing constant D.C. Electricity.

With the switch of a button mounted on the instrument panel the gauge can also show available volts stored in the 2.7 volt super capacitor.

Said device contains a rectangular vertically erect heat resistant one gallon tin can with exposed base from which the heat of 2 smokeless oil burning lamps enters and produces a steady output of electricity via the 24 thermoelectric elements wired in series.

The thermoelectric elements are therein attached to the flat sides of the vertically mounted heat resistant rectangular tin can by metal strapping tape, which also is sometimes called metal plumber's tape.

No moving parts are necessary to produce constant silent D.C. voltage and said device operates in all weather environments. It performs especially best during cool or snowy weather and does not fluctuate in voltage as solar or wind electricity generating devices do. This is due to the enhanced temperature difference occurring between the hot and cold side of a thermoelectric element. This makes it especially adapted for extreme environments such as space, polar, constant rain, darkness, lack of wind and at sea, where weather conditions can turn unexpectedly harsh, and when electrical power and heat is in demand the most.

As the vertically erected heat resistant rectangular tin can begins to warm from the heat of the two smokeless oil burning lamps positioned at the bottom portion of the device, the thermoelectric elements, due to a difference in temperature, discharge their electricity into the 2.7 volt super capacitor creating a storable power source for future use. Compared to rechargeable NiCad batteries which have a limited number of recharge times, super capacitors can be charged thousands of times, giving this device extreme long term durability and reliability. An additional long term feature of this device is TEC's have an average lifespan of 20 years.

When the 2.7 volt super capacitor is connected in series with a second charged 2.7 volt super capacitor, and both 2.7 volt super capacitors have been fully charged by the Peltier Tower, they can be detached from the Peliter Tower, with a total voltage of 5.4 volts, and used to charge portable electrical conveniences, such as IPAD's, GPS devices, Micro Heating Elements and other devices in the 5 volt range.

The portable, detachable device of Claim 1, the device further comprising of one or more cables coupling the thermoelectric element to one or more 2.7 volt super capacitors.

- The portable/detachable device wherein the upper container is designed to induce electrical current.
- A method of using said device of claim 1 to create power free of carbon based fossil fuels and use this power to generate electricity to charge one 2.7 volt super capacitor; the method composed of a thermoelectric coupling; the output of a series of wired thermoelectric devices to at least one 2.7 volt super capacitor and manually applying heat to the inside of a vertically erected heat resistant one gallon metallic can with open base for the sole purpose of providing electricity and /or heat, wherein attached are multiple thermoelectric modules wired in series.
- The method of claim 2. Further comprising providing visual indication of power output from said series wired thermoelectric elements composed of a weatherproof LED digital voltmeter.

Claim 2.

The portable device of Claim two wherein at least one smokeless oil burning lamp is enclosed in a removable / detachable base.

The portable / detachable device wherein the lower container is designed to provide heat and light.

A method of using the lower portion of the device of Claim 2 to heat water or heat food; the method composed of two smokeless oil burning lamps. Contained in a laminated wire enclosure for an additional purpose of providing heat to generate electricity.

The method of Claim 2. Further providing access to said two smokeless oil burning lamps by removing two metal pull pins which are positioned at opposite ends of the wooden base of the lower portion of the device allowing for refueling, replacement or maintenance.

ABSTRACT

A portable device for supplying power to charge one or more 2.7 volt super capacitors, rechargeable batteries, heat water or an open space or as a method of lightweight portable power wherein the device is heated manually and is constructed with at least one thermoelectric element, which has one cold side and one warm to hot side. A set of positive and negative cables protruding from the end of the thermoelectric elements wired in series, which are therein connected to one or more 2.7 volt super capacitors. A portable one gallon heat resistant vertically erected rectangular tin can with exposed base accepts the heat generated by the two smokeless oil burning lamps contained in the lower portion of the device.

The lower portion of the device is detachable, allowing access to the two smokeless oil burning lamps or for easy transport or storage of the top or lower portion.

The device can be about 2 or more feet high and 1 foot in diameter. However the device should not be limited to these dimensions only and other suitable dimensions should be possible. For example connecting 2 of these devices together in series would double the voltage output.

Although the present invention has been described in connection with the specified embodiments, it should not be construed as being in any way limited to the presented examples. The scope of the present invention is to be interpreted in the light of the accompanying claim set. In the context of the claims, the terms “comprising” or “comprises” do not exclude other possible elements or steps. Also, the mentioning of references such as “a” or “an” etc. should not be construed as excluding a plurality. The use of reference signs in the claims with respect to elements indicated in the figures shall also not be construed as limiting the scope of the invention.

Furthermore, individual features mentioned in different claims, may possibly be advantageously combined, and the mentioning of these features in different claims does not exclude that a combination of features is not possible and advantageous.

Citations

Wire Dish Rack. US 1553624 A
Thermoelectric Element. US 2712563 A
Digital volt meter. US 4127810 A