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[EPODOC: SS 2] **backpack and light and charger**

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PN - [KR20160094772](#) A 20160810

PR - KR20150016202 20150202

AP - KR20150016202 20150202

DT - I

CNOI - [A45F4/00](#) ; [A45F3/04](#) ; [A45F3/12](#)

PA - KIM YONG WON [KR]

TI - BACK PACK

AB - The present invention relates to a **backpack** separating a backpiece having a shoulder strap from a bag and, more specifically, to a **backpack** separating a backpiece having a shoulder strap from a bag, which mounts a waterproof wire, a waterproof **charger** for cell phones, and an **light**-emitting body to a backpiece and a bag in order to increase safety.

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PN - [CN204191831U](#) U 20150311

PR - CN20142670550U 20141111

AP - CN20142670550U 20141111

DT - I

PA - SHENYANGINSTENGINEERING

TI - Portable mobile charging **backpack**

AB - The utility model relates to the field of backpacks, and particularly relates to a portable mobile charging **backpack** which can be charged by solar energy. The **backpack** comprises a **backpack** body, shoulder straps arranged on the side face inward the **backpack** body and a flexible photoelectric converter which is fixed on the side face outward the **backpack** body by virtue of Velcro, wherein the photoelectric converter comprises a flexible **light**-permeable waterproof layer, a plurality of flexible substrate solar cell panels arranged in parallel and a rubber base layer according to the

direction from the outward **backpack** body; the plurality of flexible substrate solar cell panels are connected in series and sequentially connected with a rectifier and filter circuit and a voltage stabilizing circuit; and the voltage stabilizing circuit is connected with an output port formed in the outer part of the rubber base layer and is used for outputting voltage. The **backpack** can be used for charging at any time, is convenient to carry, is flexible and cannot be easily broken, and the waterproof anti-static solar cells are flexibly arranged on the **backpack** by adopting optical connection, so that the defect that an existing mobile **charger** depends on commercial power can be overcome; and the solar cells can be carried on the back with a user when the user goes out, can be used for charging power any time any where, and cannot be easily broken.

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PN - [CN104047821](#) A 20140917
 PR - CN2013175462 20130311
 AP - CN2013175462 20130311
 DT - I
 PA - LI WENTING
 TI - Spring portable **charger**
 AB - The invention provides a spring portable **charger**, which comprises a case, wherein a fixing buckle ring is arranged at the bottom of the case, the top of the case is provided with a movable **backpack** buckle ring, the movable **backpack** buckle ring is connected with a linear sawtooth slide rod, the linear sawtooth slide rod is connected with a gearwheel, the gearwheel is connected with a pinion, the pinion is arranged on a power generator provided with a one-way gear, the power generator is electrically connected with a power supply output interface and an emergent LED (**light** emitting diode) lamp, the bottom of the linear sawtooth slide rod is connected with a spring, and the spring is fixedly arranged at the bottom of the case. The spring portable **charger** has the advantages that much kinetic energy generated when people walk is utilized, the kinetic energy is sufficiently utilized to be converted into electric energy, other energy is not utilized, and energy sources are saved. In addition, the effect of a portable power source is achieved when the people are in urgent need of charging, and convenience and high speed are realized. The charging can be realized when people walk, solar energy does not need to be considered, and the charging can also be realized even in rainy days or at night.

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PN - [CN203146254U](#) U 20130821
 PR - CN20132107713U 20130311
 AP - CN20132107713U 20130311
 DT - I
 PA - LI WENTING
 TI - Spring portable **charger**
 AB - The utility model discloses a spring portable **charger**. The spring portable **charger** comprises a shell, wherein the bottom part of the shell is provided with a fixing buckle ring, the top part of the shell is provided with a movable **backpack** buckle ring, the

movable **backpack** buckle ring is connected with a linear sawtooth sliding rod, the linear sawtooth sliding rod is connected with a big gear, the big gear is connected with a pinion gear, the pinion gear is arranged on an electric generator with a one-way gear, the electric generator is electrically connected with a power supply output interface and an emergency LED (**Light** Emitting Diode) lamp, the bottom part of the linear sawtooth sliding rod is connected with a spring, and the spring is fixedly arranged at the bottom part of the shell. According to the spring portable **charger** disclosed by the utility model, plenty of kinetic energy generated during walking of people is utilized, the kinetic energy is fully converted into electric energy, other energies are not utilized, and the energy resource is saved; the spring portable **charger** has the function of being used as a mobile power supply when people are badly in need of charging, and the use is very convenient and fast; and electric appliances can be charged just by walking, the solar energy is not needed to be considered, and the electric appliances can also be charged even in a rainy day and at night.

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PN - [CN203041120U](#) U 20130710

PR - CN2013243647U 20130128

AP - CN2013243647U 20130128

DT - I

PA - UNIV SHANGHAI DIANJI

TI - **Backpack** with manually-charging portable lamp

AB - The utility model discloses a **backpack** with a manually-charging portable lamp. The **backpack** is a double-shoulder bag. A bag body is provided with a guide line hole and a small internally-arranged bag. A storage battery is arranged in the small internally-arranged bag. A hand-pressing type **charger** capable of self-generating electricity is arranged at the bottom of the bag body. A buckle is arranged on a back strap. A **light**-emitting diode (LED) lam and an external power spigot connected with the LED lamp are arranged on the buckle. The external power spigot is connected with the storage battery through an electric connecting wire. The hand-pressing type **charger** capable of self-generating electricity can charge the storage battery through a power line. An alternating current power supply charging device is arranged on the storage battery. The **backpack** with the manually-charging portable lamp has the advantages of being not only capable of charging the storage battery through an alternating current power supply, but also capable of charging the storage battery in an emergency mode through the hand-pressing type **charger** capable of self-generating electricity, meeting requirements of outdoor exercise, enabling two hands of a person to be free at utilization time of an illuminating **light** so that the person is safer in action, being convenient to manufacture and utilize, and being enabled to be stronger in practicality.

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PN - [CN201403718Y](#) Y 20100217

PR - CN2009203668U 20090119

AP - CN2009203668U 20090119

DT - I

PA - ZHONGBAO YE
 TI - Solar charging **backpack**
 AB - The utility model discloses a solar charging **backpack**, i.e. a solar **charger** is arranged on the basis of the prior **backpack**, electric devices are fixed on a **backpack** shell by utilizing adhesive waterproof tapes, and the solar **charger** can charge portable digital devices compatible with the USB charging function. The utility model is characterized by high portability, corrosion resistance, high and low temperature resistance, aging resistance and **light** weight.

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PN - [CN2821164Y](#) Y 20060927
 PR - CN2005252054U 20050930
 AP - CN2005252054U 20050930
 DT - I
 PA - GU ZHENYU [CN]
 TI - Walking portable micro generator
 AB - The utility model discloses a walking portable miniature generating device, which comprises air filling air cushions which are fixed at the bottom of shoes, a **backpack** and a miniature air wheel generator which is fixed in the **backpack**, wherein the air filling air cushions on soles are connected with the miniature air wheel generator which is fixed in the **backpack** through an air pipe. The utility model can also comprise a **charger** which is connected with the miniature generator and a chargeable battery, and in the mode, the electric energy which is emitted by the miniature air wheel generator is stored. The utility model has the advantages of simple structure, **light** weight, low cost and larger generating capacity, use the kinetic energy and the potential energy which are generated when a walker walks to generate electricity, and can provides the electric energy for field use electronic equipment of a mobile phone, a lantern, a portable computer, the night equipment, etc., which are carried out by people. The problems that the people go out for travel, carry lots of batteries during field operation and charge the batteries around are solved.