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- (54) Benævnelse: **GRAFISK BILLEDDANNELSESANORDNING**
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DE-U1-202008 009 828
US-A1- 2011 007 496
US-B1- 6 265 984

DESCRIPTION

Technical Field

[0001] The invention relates to the graphic imagining device which creates text, inscriptions or images by turning on the LEDs when moving.

Background of the art

[0002] Spinning the stick featuring the textile-wrapped ends soaked in a combustible substance has been the best-known and oldest solution. By lighting up and juggling the stick, an illusion of a fire circle has been created.

[0003] The stick featuring the static luminous elements has been a more modern imagining device, where spinning the stick creates an illusion of static light circles.

[0004] DE202008009828U discloses the graphical stick equipped with the batteries, LEDs and control unit to create different patterns when spinning. The stick also consists of a number of components and its production is costly.

[0005] US5079679 A discloses the multi-purpose traffic director's stick. The special design of both the inner and external stick walls optimizes the light-converging effect of the stick. The battery has been installed at the handle end. Moreover, it has been equipped with the reproducer and the lamp (neon tube or aligned LED strip). In addition to constant lighting, the lamp tube will also serve as a control rod and may have a blinking effect for the collision warning lamp in case of a collision or engine failure.

The reproducer can produce a whistle sound (electronic whistle).

[0006] US2015029701 discloses the traffic director's light stick which features the battery and the lamps producing the effect multiplied by reflective surfaces.

[0007] The entire prior art solutions disclosed herein include a number of disadvantages, especially the complex construction and the use of complicated components or they represent the non- programmable solutions.

Invention Fundamentals

[0008] The invention disclosed in the present patent application removes the disadvantages of the prior art, where the graphic imagining device forms the basis of the invention. The graphic imagining device shows the inscriptions and patterns and leaves them in the eye when moving.

[0009] The device is hanging on a chain held by fingers and creates the pre-programmed pattern when spinning. The recharging batteries power the graphic imagining device having the specially designed software installed.

[0010] The hollow tube made of the transparent material, preferably of polycarbonate, consists of a processor (control unit), RGB diodes (resolution 1x12), light scattering rings, the inbuilt input to charge the energy source with the ability to communicate with either the PC or other devices, such as tablets, smartphone via the USB port or wireless connection, accelerometer and gyroscope. The graphic imagining device consists of a GPS module, battery charging indicator, single end featuring the metal detector, where the second end features a tactical lamp. The graphic imagining device features the modular system.

[0011] The graphic imagining device's connection consists of the processor linked to the GPS module and metal detector, gyroscope and accelerometer, moreover, the USB connector is linked to the charger equipped with the battery charging indicator connected to a direct current source (DC/DC converter). Moreover, the processor is connected to three LED controllers linked to the DC/DC inverter, where the LED controller is connected to 74 RGB LED diodes, the LED controller is connected to 20 UV LED diodes and the LED controller is connected to the 3W CREE LED diode. Next to the USB connector, the Wi-Fi module can be connected to wirelessly connect and program the imagining device.

Figures overview on the drawings

[0012]

Fig. 1 illustrates the connection located in the graphic imagining device.

Fig. 2 illustrates the imagining device.

Embodiment Examples

[0013] The graphic imagining device shows the inscriptions and patterns and leaves them in the eye when moving

[0014] The device is hanging on a chain held by fingers and creates the pre-programmed pattern when spinning.

[0015] The recharging batteries 5a power the graphic imagining device having the specially designed software installed.

[0016] The hollow tube-like sleeve 17 made of transparent material, preferably of polycarbonate, consists of a processor 4 (control unit), RGB diodes 13, 14, 15 (resolution 1x12), light scattering rings, the USB connector 7 input inbuilt to the tube to charge the energy source communicating with either the PC or other devices, such as tablets, smartphone via the USB connector 7 and/or by wireless connection via the Wi-Fi module 8, accelerometer 12 and gyroscope 11. The graphic imaging device consists of a GPS module 10, battery 5a charging indicator 19, single end featuring the metal detector 9, where the second end features a tactical lamp 16. The graphic imaging device features the modular system.

[0017] The graphic imaging device's connection consists of the processor 4 linked to the GPS module 10 and metal detector 9, gyroscope 11 and accelerometer 12, moreover, the USB connector 7 also linked to the charger 6 equipped with the battery 5a charging indicator 19 and the battery 5a connected to the direct current DC/DC converter 5. Moreover, the processor 4 has is connected to three LED controllers 1, 2, 3 linked to the DC/DC inverter 5, where the LED controller 1 is connected to 74 RGB LED diodes 13, the LED controller 2 is connected to 20 UV LED diodes 14 and LED controller 3 is connected to the 3W CREE LED diode 15. Next to the USB connector 7, the Wi-Fi module 8 can be connected to wirelessly connect and program the display device.

Industry Applicability

[0018] Graphic imaging device serves as an artistic performance tool which is safe in comparison with the use of open flame. The device allows you to generate a number of light patterns and texts depending on the computer program used. It also serves as the light utility, for example, for armed and police forces for the purpose of light signalling or traffic control on the roads (accidents, machinery movement, building operations, etc.). It can also be used in the photo industry on photography using a technique called Lightpainting, i. e. light painting.

REFERENCES CITED IN THE DESCRIPTION

Cited references

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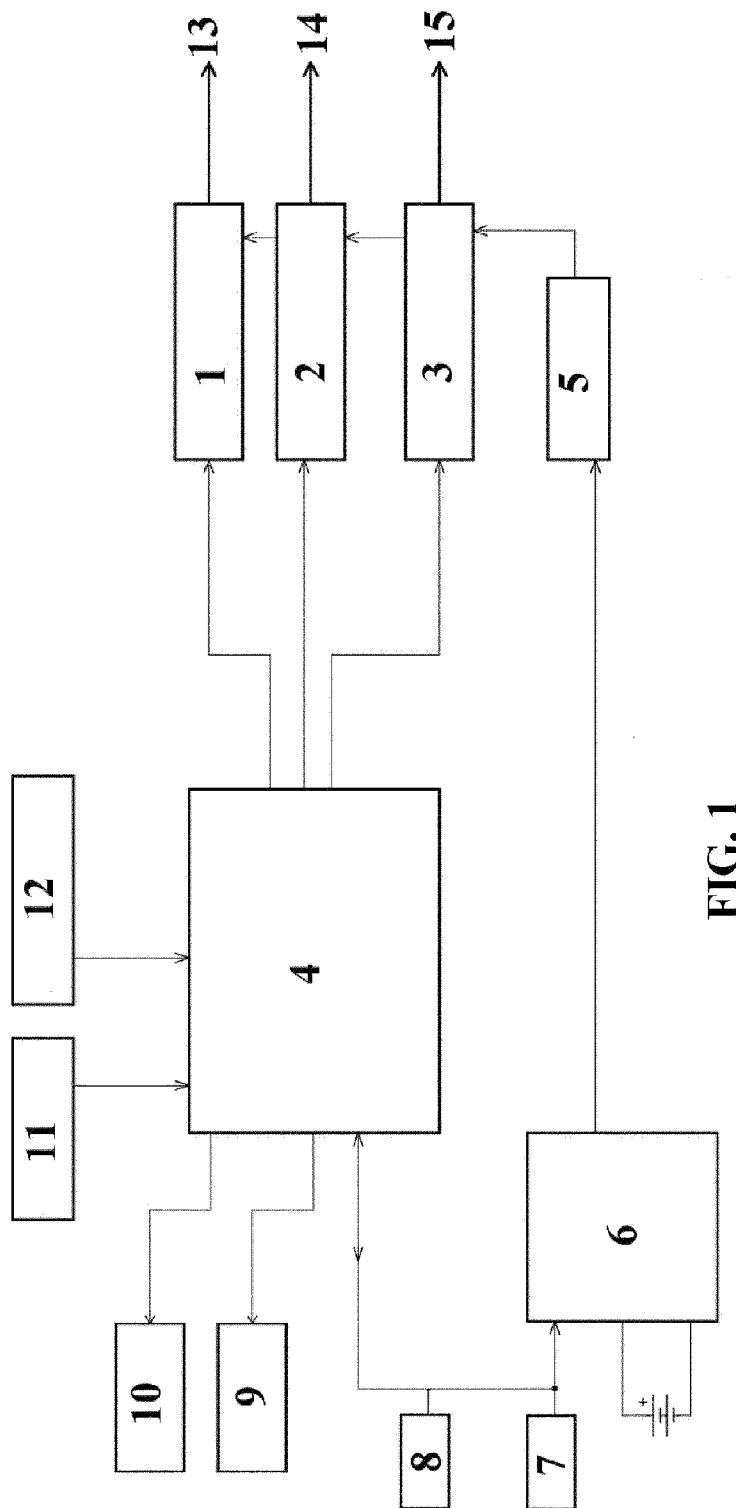
Patent documents cited in the description

- DE202008009828U [0004]
- US5079679A [0005]
- US2015029701A [0006]

GRAFISK BILLEDDANNELSESANORDNING**PATENTKRAV**

1. Grafisk billeddannelsesanordning i form af en hul rørignende muffe (17), der er fremstillet af gennemsigtigt materiale, hvori der er indsat et batteri (5a), RGB-LED-dioder (13), en processor (4) og et USB-stik (7), hvor anordningen hænger på en gribekæde eller -snor, der, under brug, holdes af fingre og skaber forprogrammerede mønstre, mens den roterer, kendetegnet ved, at der også er indsat UV-LED-dioder (14), en 3 Watt LED-diode (15), en taktisk lampe og lysspredningsringe i muffen (17), ved at processoren (4) er forbundet med et GPS-modul (10), en metaldetektor (9), et gyroskop (11) og et accelerometer (12), ved at USB-stikket (7) er tilsluttet til en oplader (6) med en batteriopladningsindikator (19), som er tilknyttet batteriet (5a), der er tilsluttet til en jævnstrøms-DC/DC-omformer (5), og ved at processoren (4) er tilsluttet til de tre LED-controllere (1, 2, 3), der er forbundet med jævnstrøms-DC/DC-omformeren (5), hvor den første LED-controller (1) er tilsluttet til 74 RGB-LED-dioder (13), hvor den anden LED-controller (2) er tilsluttet til 20 UV-LED-dioder (14), og hvor den tredje LED-controller (3) er tilsluttet til 3 watt LED-dioden (15).
2. Grafisk billeddannelsesanordning ifølge krav 1, kendetegnet ved, at et wi-fi-modul (8) er tilsluttet til USB-stikket (7) for trådløs forbindelse med henblik på trådløs tilslutning og programmering af billeddannelsen.
3. Grafisk billeddannelsesanordning ifølge krav 1, kendetegnet ved, at muffen (17) er fremstillet af gennemsigtigt polykarbonat.

DRAWINGS



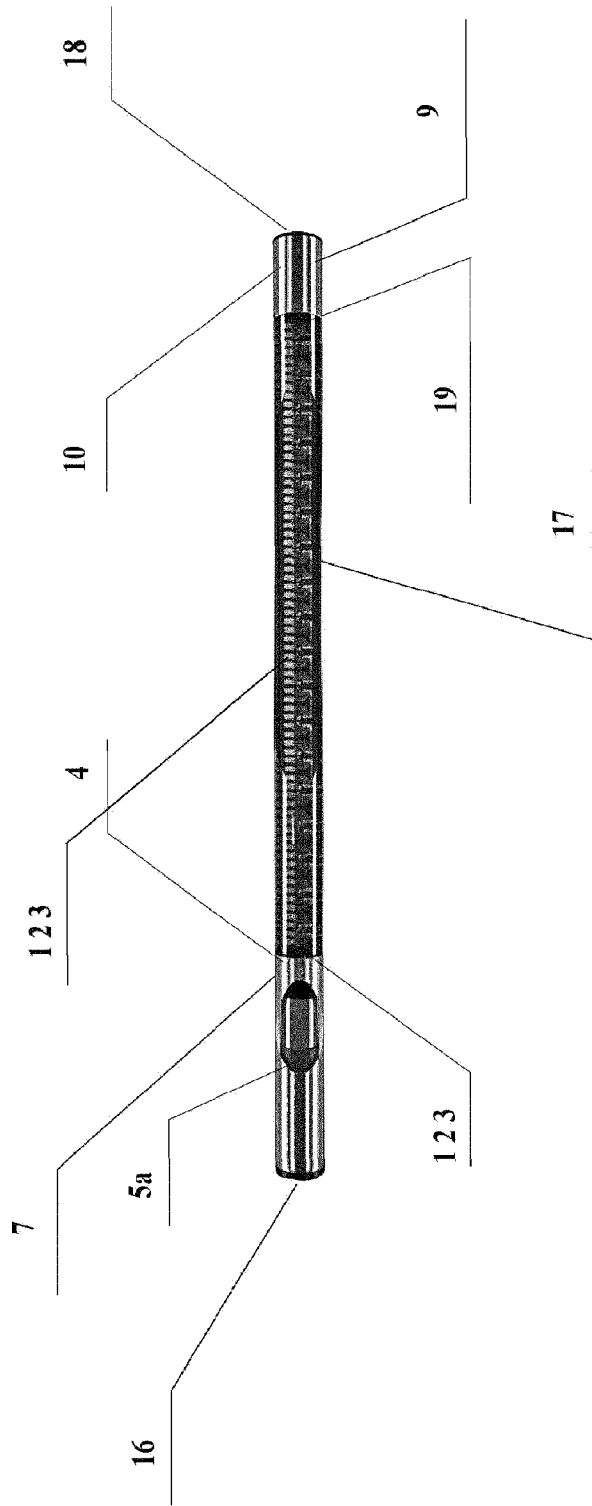


FIG. 2