US 20090293896A1

(19) **United States**

(12) **Patent Application Publication**

Simpson

(10) **Pub. No.: US 2009/0293896 A1**

(43) **Pub. Date: Dec. 3, 2009**

(54) **ILLUMINATED ARTIFICIAL FINGERNAILS**

(76) Inventor: **Alfred N. Simpson**, Philadelphia, PA (US)

Correspondence Address:
Alfred N. Simpson
c/o Patricia A. Bennet
621 Ferne Blvd.
Drexel Hill, PA 19036 (US)

(21) Appl. No.: **12/462,082**

(22) Filed: **Jul. 29, 2009**

Related U.S. Application Data

(63) Continuation-in-part of application No. 11/471,811, filed on Jun. 21, 2006, now abandoned.

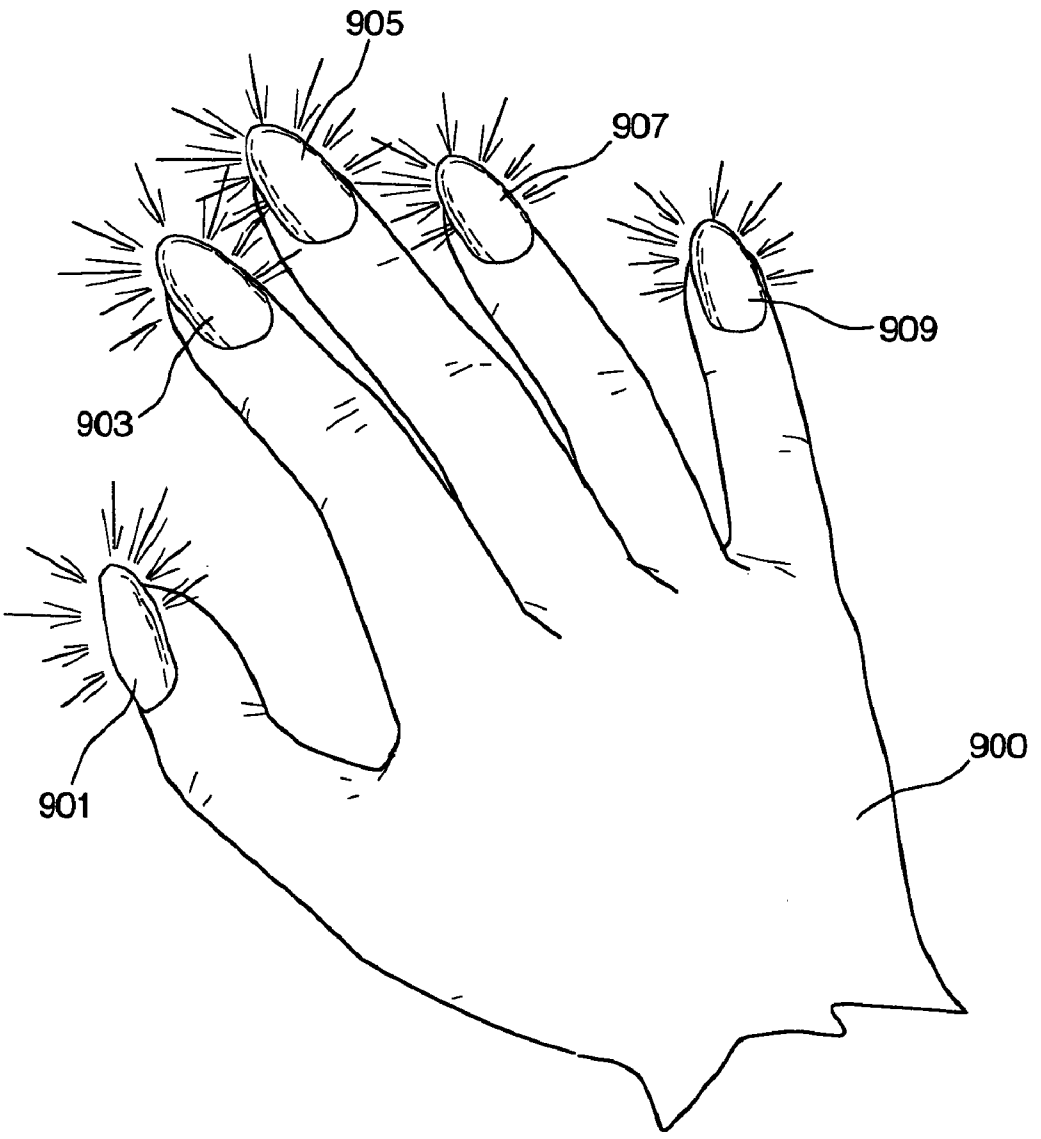
Publication Classification

(51) **Int. Cl.**
A45D 31/00 (2006.01)

(52) **U.S. Cl.** **132/73**

(57) **ABSTRACT**

An illuminated artificial nail has a base substrate, a lamp, a power source, a top and an on/off switch. The base substrate has a top view footprint of a shape and size to fit onto at least a portion of a human nail, and has sufficient flexibility to form into, or having a general curvature of, a human nail, the base substrate being attachable to a human fingernail, such as by adhesive. The lamp is located on top of the base substrate, and the top member has a single planar smooth top surface. The top member is selected from the group consisting of a top portion of the lamp, and a cover on top of the lamp and having at least a portion thereof being light transmittable.



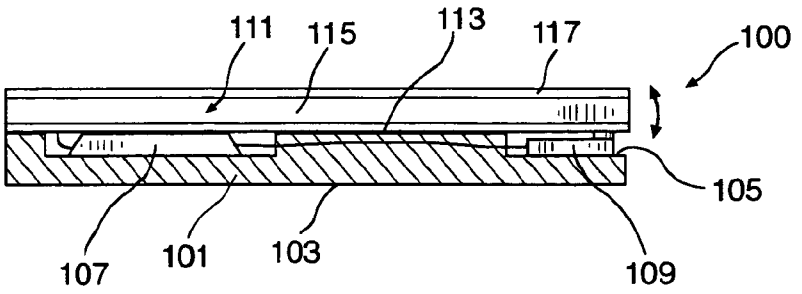


Fig. 1

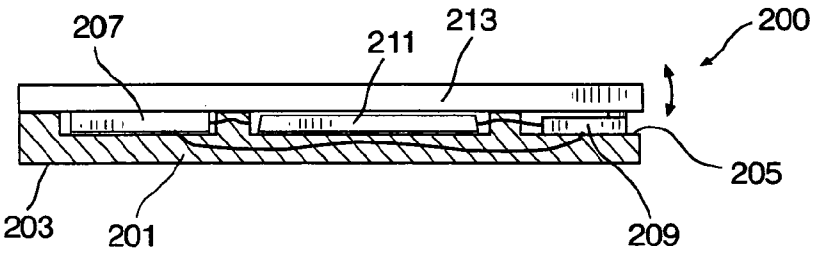


Fig. 2

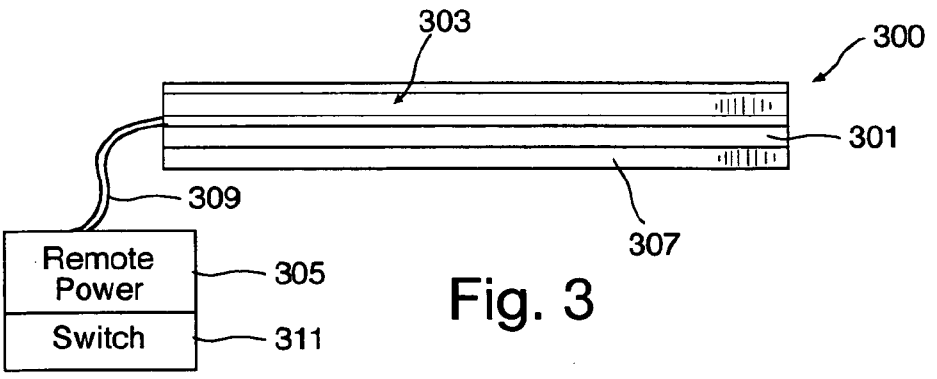


Fig. 3

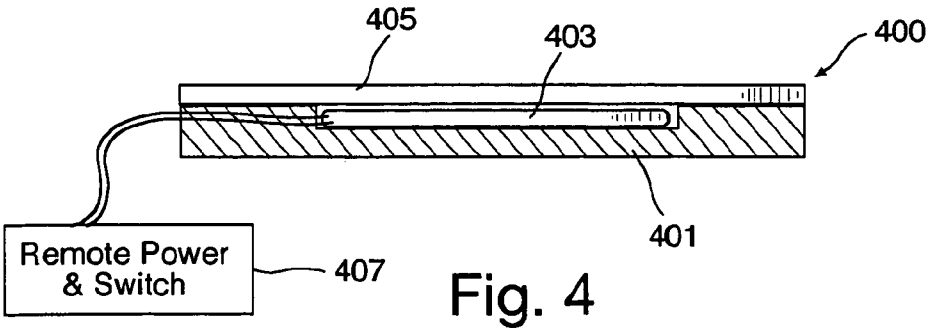


Fig. 4

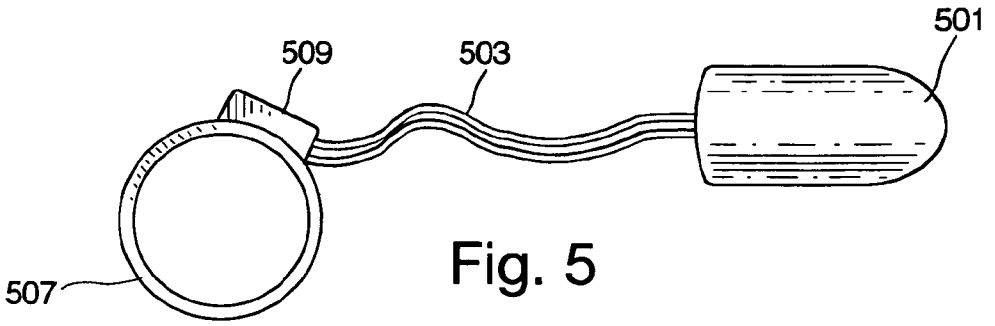


Fig. 5

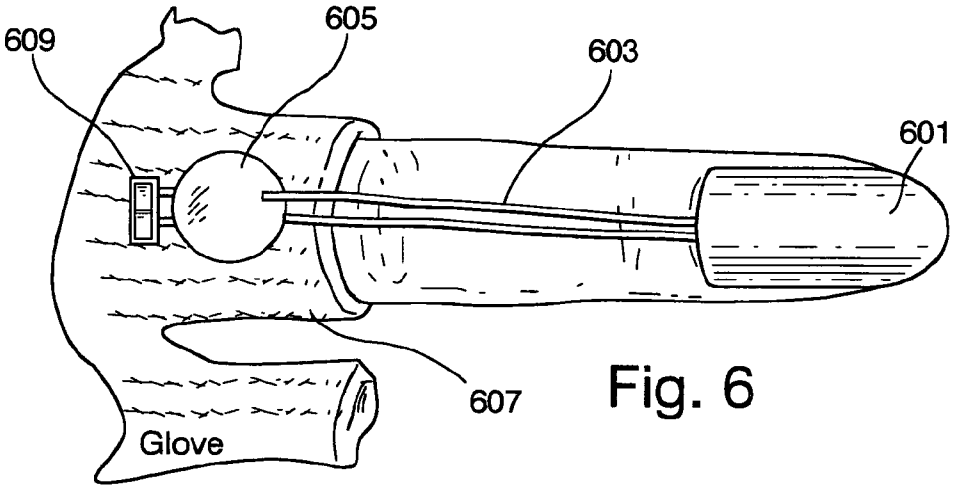


Fig. 6

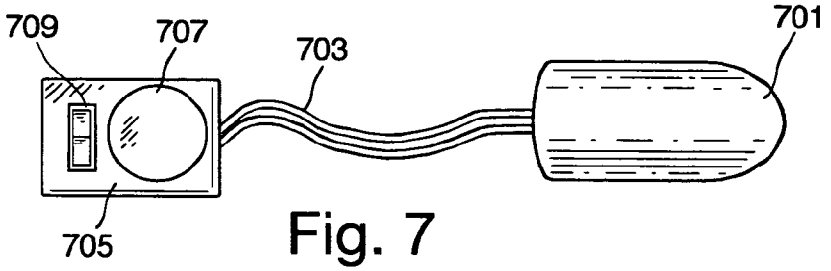


Fig. 7

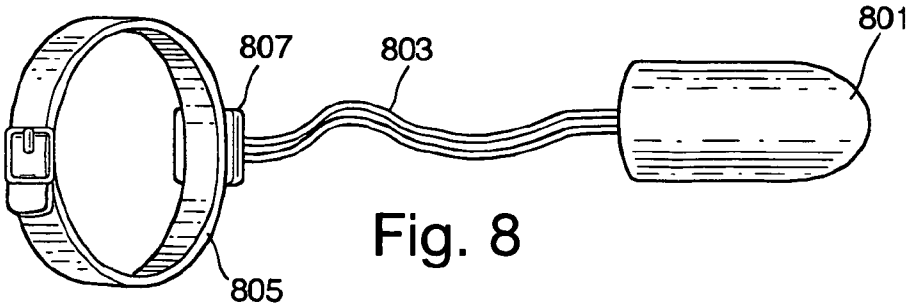


Fig. 8

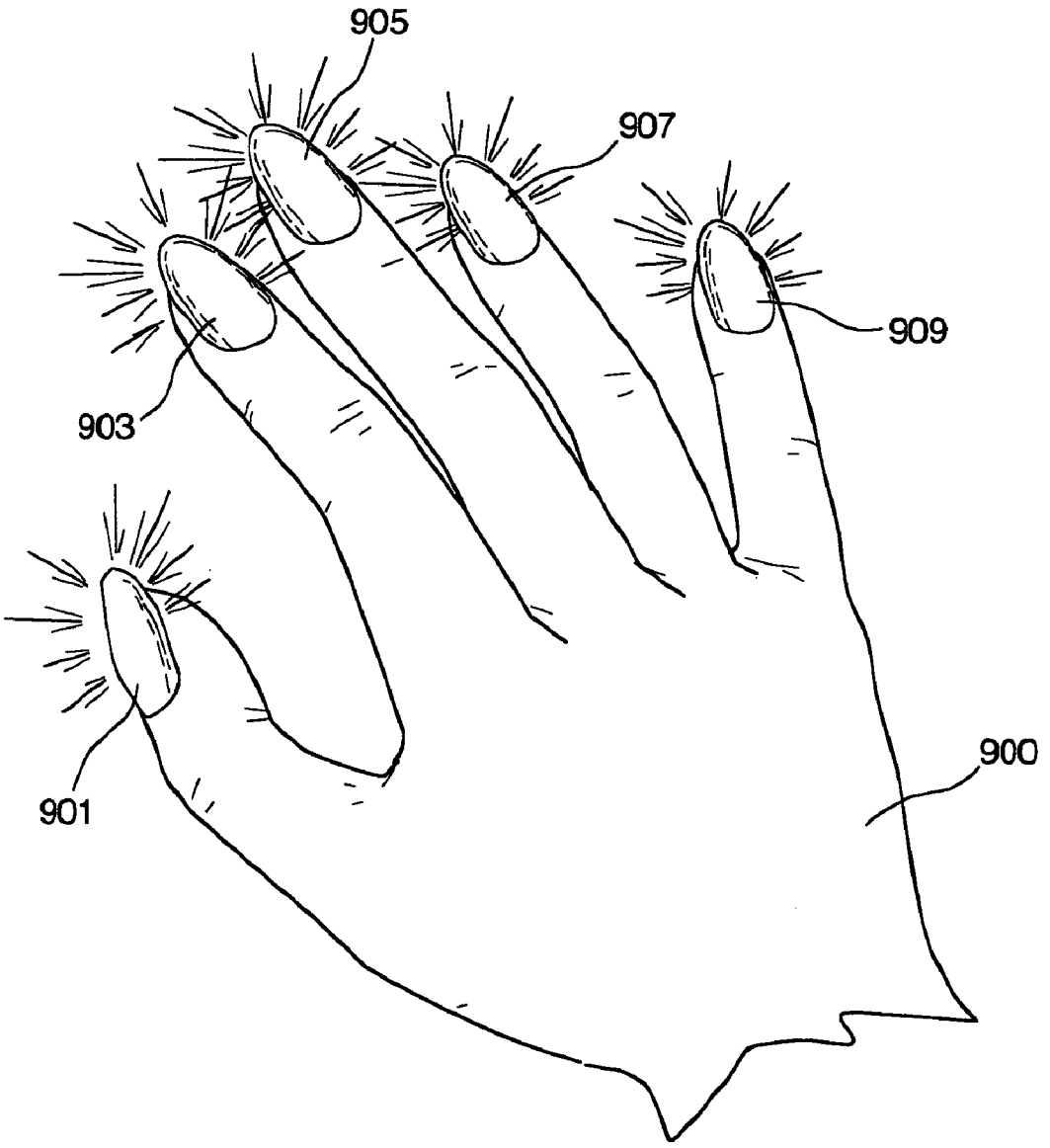


Fig. 9

ILLUMINATED ARTIFICIAL FINGERNAILS

REFERENCE TO RELATED APPLICATIONS

[0001] This patent application is a continuation in part of copending application Ser. No. 11/471,811 filed on Jun. 21, 2006 by the same inventor herein and entitled "ILLUMINATED ARTIFICIAL FINGERNAILS".

BACKGROUND OF INVENTION

[0002] a. Field of Invention

[0003] The present invention relates to artificial nails for both fingers and toes, but especially fingernails, wherein the nails have smooth flat top surfaces and are illuminatable or are illuminated. The present invention artificial nails may be self-contained with power and switching built-in, or may have separate power and/or switch features that are remote from the artificial nail. These separate features may be attached to the hand or finger and be connected by a small or hidden wire to the artificial nails. In some preferred embodiments, the nails have flat light lamps and may have press-to-turn-on and press-to-shut-off switch systems.

[0004] b. Description of Related Art

[0005] The following patents are representative of the field pertaining to the present invention:

[0006] U.S. Pat. No. 6,631,723 B1 to Keith A. Mullen et al is directed to artificial nails with three dimensional features that may be a representation of any known or imagined person, place or thing. The three dimensional feature may have a protrusion that is graspable to assist in placing the nail onto a toenail of fingernail. The artificial nail may have a tool or may have a writing instrument. The three dimensional feature may also have hair, a sound emitter and may include a power source and a light emitter to emit light from a portion of the three dimensional feature, such as a head's eyes.

[0007] U.S. Pat. No. 4,898,192 describes an artificial nail or toenail that can provide an illusion of length with a varying color pattern, through the use of a three dimensional holographic image.

[0008] U.S. Pat. No. Des. 433,536 illustrates a set of artificial toenails and fingernails that have protruding "Mickey Mouse" silhouette ears.

[0009] U.S. Pat. No. 5,276,382 describes electroluminescent lamps.

[0010] Notwithstanding the foregoing prior art patents, the present invention is neither taught nor rendered obvious in view of said prior art references.

SUMMARY OF THE PRESENT INVENTION

[0011] The present invention relates to an illuminated artificial nail for human fingernails and toenails, but especially for fingernails. The device includes a base substrate having a top view footprint of a shape and size to fit onto at least a portion of a human nail, and having sufficient flexibility to form into, or having a general curvature of, a human nail, the base substrate being attachable to a human fingernail. There is a lamp fixed to and located atop the base substrate and a power source connected to the lamp to illuminate it. There is also a top member having a single planar smooth top surface, the top member being selected from the group consisting of a top portion of the lamp, and a cover on top of the lamp. The top member has at least a portion thereof light transmittable, i.e., translucent or transparent. In many embodiments, the top member may be white, translucent in the white to cream color range, or it may have color like color transparencies. Thus, shades of reds, pinks, oranges, purples, magentas, yellows, golds, silvers and the like may be used. In some cases neon-like colors are preferred.

[0012] In some preferred embodiments of the present invention, the illuminated artificial nail further includes an on/off switch connect to the power source and to the lamp. In some preferred embodiments of the present invention, the power source is located between the top member and the base substrate. In other preferred embodiments of the present invention, the power source is located remotely from the base substrate and is connected via wiring to the lamp.

[0013] In some preferred embodiments of the present invention, the power source is separated from the base substrate and lamp and has a housing that is attachable to a human. This housing includes attachment means selected from the group consisting of an adhesive, a strap, a ring, a cut glove, and a bracelet.

[0014] In some preferred embodiments of the present invention, the lamp is elected from the group consisting of an LED, an LCD, a DC incandescent bulb and a laminated flat lamp.

[0015] In some preferred embodiments of the present invention, the laminated flat lamp is a flat, laminated, phosphorous-based electroluminescent sheet light source.

[0016] In some preferred embodiments of the present invention, the illuminated artificial nail includes the base substrate, a flat power cell attached to the top the base substrate, a reciprocating on/off switch atop the base substrate and circuitry connecting the power cell the on/off switch and the lamp, the lamp being the flat, laminated, phosphorous-based electroluminescent sheet light source wherein its top laminate layer has the smooth top surface.

[0017] In some preferred embodiments of the present invention, the illuminated artificial nail includes the base substrate, a flat power cell attached to the top the base substrate, a reciprocating on/off switch atop the base substrate and circuitry connecting the power cell the on/off switch and the lamp, and the top member located above all of the foregoing and attached to at least one of the foregoing. In some of the preferred embodiments of the present invention, the top member is flexible, at least at the switch, the switch is located below it and the switch may be turned on and off by pressing the top member.

[0018] In some preferred embodiments of the present invention, the top member is the flat, laminated, phosphorous-based electroluminescent sheet light source and it is flexible at least at the switch, the switch is located below it and the switch may be turned on and off by pressing the flat, laminated, phosphorous-based electroluminescent sheet light source.

[0019] In some preferred embodiments of the present invention, the nail is a disposable nail and includes illumination activation means that may be activated upon application to a nail.

[0020] In some preferred embodiments of the present invention, the device also includes adhesive on the bottom of the base substrate for ready attachment. There may be a pealable strip that enables a user to remove the strip to expose the adhesive for application to a nail. In disposable versions, the removal of the strip may release or enable a circuit completion to turn on the light. When the battery dies, or when the evening is over, or whenever the user desires, the nail may be removed and thrown away. In non-disposable

versions, the nail may be worn until damaged or until the user decides to remove it. In some preferred embodiments, the battery may be replaceable. This is most convenient when the power source is remotely located, e.g. on a ring, glove or otherwise from the nail itself.

BRIEF DESCRIPTION OF THE DRAWINGS

[0021] The present invention should be more fully understood when the specification herein is taken in conjunction with the drawings appended hereto wherein:

[0022] FIG. **1** illustrates a partial cut side view of one preferred embodiment of the present invention illuminated fingernail;

[0023] FIG. **2** illustrates a partial cut side view of another preferred embodiment present invention nail;

[0024] FIG. **3** illustrates a partial cut side view of another preferred embodiment present invention nail using a flat lamp and remote power source and switch;

[0025] FIG. **4** illustrates a partial cut side view of another preferred embodiment present invention nail using an LCD, a LED or incandescent lamp with remote components;

[0026] FIG. **5** illustrates a top view of one preferred embodiment of the present invention nail connected to a ring;

[0027] FIG. **6** illustrates a top view of one preferred embodiment of the present invention nail connected to a finger-cut glove;

[0028] FIG. **7** illustrates a top view of one preferred embodiment of the present invention nail connected to an adhesive pad;

[0029] FIG. **8** illustrates a top view of one preferred embodiment of the present invention nail connected to a bracelet or watch; and,

[0030] FIG. **9** illustrates a set of present invention nails from taken FIG. **1** or FIG. **2**, applied to nails and in full illumination.

DETAILED DESCRIPTION OF THE PRESENT INVENTION

[0031] The present invention relates to flat smooth artificial nails that light up. They may have a curvature or may be flexible to yield to the natural curve of human nails, but to simulate nails, they must be free of three dimensional topography. FIG. **1** illustrates a partial cut side view of present invention illuminated fingernail **100**. Nail **100** includes a base substrate **101**, with a bottom **103** and a top **105**. Bottom **105** may have adhesive (not shown) on it, or adhesive may be applied to it, to the natural nail to which it is attached or both. Base substrate may generally be made of any known plastic material that can be adhered to human nails, including, but not limited to natural and synthetic resins, acrylics, polyesters, polyethylenes, polypropylenes, urethanes, etc.

[0032] On the top of base substrate **101** and attached to it or encased or otherwise held in the device, is a battery, fuel cell or other power source **107**. Attached at the top is an electroluminescent sheet lamp **111** that has a smooth top laminate **117** a phosphorus activateable interlayer **115** and a base laminate **113** with appropriate circuitry for completing the circuit to illuminate it. The materials for these flat light are well known and within the purview of the flat light artisan. Power source **107** is electrically connected to lamp **111** and to switch **109**, as shown. While it is shown as wired to illustrate the connections, printed circuitry could alternatively or partially be used. Switch **109** is a reciprocal on/off switch, i.e., press and it turns on, press again and it turns off, repeating the cycle with each depression. Thus, pressing the flexible front end of nail lamp **111** will turn the lamp **111** on and pressing again will turn it off.

[0033] FIG. **2** illustrates a partial cut side view of another preferred embodiment present invention nail **200**. Nail **200** includes a base substrate **201**, with a bottom **203** and a top **205**. As above with respect to FIG. **1**, bottom **205** may have adhesive on it, or adhesive may be applied to it, to the natural nail to which it is attached or both. On the top of base substrate **201** and attached to it or encased or otherwise held in the device, is a battery, fuel cell or other power source **207**, a lamp **211** and a switch **209**. Attached at the top is a transparent or translucent top member **213**. This top member may be formed of any functional plastic, such as those described for the base substrate heretofore. Power source **207** is electrically connected to lamp **211** and to switch **109**, as shown. Lamp **211** is an LCD, LED, Incandescent, fluorescent, neon, gas or any other type of lamp that will work within this configuration on DC power. Switch **109** is a reciprocal on/off switch, and operates when top member **213** is pressed.

[0034] FIG. **3** illustrates a partial cut side view of another preferred embodiment present invention nail **300** using a flat lamp similar to that in FIG. **1** above, but with a remote power source and switch. Nail **300** includes a base substrate **301**, with adhesive **307** on its bottom. On the top of base substrate **301** and attached to it is an electroluminescent sheet lamp **303** that has a smooth top laminate, a phosphorus interlayer and a base laminate with appropriate circuitry for completing the circuit to illuminate it. Power source **305** is electrically connected to switch **311** and connected to lamp **303**, via wires **309**, as shown and electrically operates by turning the switch **311** on and off, as the wearer may desire.

[0035] FIG. **4** illustrates a partial cut side view of another preferred embodiment present invention nail **400** using an LCD, an LED or incandescent lamp with remote components. Nail **400** includes a base substrate **401**. On the top of base substrate **401** and attached to it is an embedded, encased or otherwise attached lamp **403**, and on top is smooth top member **405** that is at least partially translucent or transparent. Power source **305** is electrically connected to switch **311** and connected to lamp **303**, via wires **309**, as shown and electrically operates by turning the switch **311** on and off, as the wearer may desire.

[0036] FIG. **5** illustrates a top view of a present invention artificial nail **501** connected to a ring **507** via wires **503** and power source and switch **509**. The wires must have sufficient length so that when a wearer wears the nail and ring, the wires are not separated when the finger is flexed.

[0037] FIG. **6** illustrates a top view of a present invention nail **601** connected to a finger-cut glove **607** via wires **603** to power source **605** and switch **609**. Again, the wires must have sufficient length so that when a wearer wears the nail and glove, the wires are not separated when the finger is flexed.

[0038] FIG. **7** illustrates a top view a present invention nail **701** connected to an adhesive pad **705** via wires **703** to power source **707** and switch **709**. This pad **705** may be adhered to the back of the hand of the forearm or any other area close to the finger. Again, the wires must have sufficient length so that when a wearer wears the nail and pad, the wires are not separated when the finger is flexed.

[0039] FIG. **8** illustrates a top view of a present invention nail **801** connected to a bracelet or watch **805** via wires **803** to power source and switch **807**. Again, the wires must have

sufficient length so that when a wearer wears the nail and glove, the wires are not separated when the finger is flexed.

[0040] FIG. **9** illustrates a set of present invention nails from taken FIG. **1** or FIG. **2**, applied to nails and in full illumination. Here, hand **900** has present invention illuminated nails **901**, **903**, **905**, **907** and **909** to illustrate the present invention in full use.

[0041] Numerous modifications and variations of the present invention are possible in light of the above teachings. It is therefore understood that within the scope of the appended claims, the invention may be practiced otherwise than as specifically described herein.

What is claimed is:

1. An illuminated artificial nail, which comprises:

a) a base substrate having a top and a bottom, and having a top view footprint of a shape and size to fit onto at least a portion of a human nail, and having sufficient flexibility to form into, or having a general curvature of, a human nail, said base substrate being attachable to a human fingernail;

b) a lamp fixed by and located on top of said base substrate and being separated from said bottom of said base substrate;

c) a power source connected to said lamp to illuminate it, said power source being selected from the group consisting of a power source located between said base substrate and a top member; and a remotely located power source.

d) a top member having a single planar smooth top surface, said top member being selected from the group consisting of a top portion of said lamp, and a cover on top of said lamp and having at least a portion thereof being light transmittable, and,

e) an on/off switch connected to said power source and to said lamp.

2. The illuminated artificial nail of claim **1** wherein said remotely located power source is connected via wiring to said lamp.

3. The illuminated artificial nail of claim **2** wherein said power source has a housing that is attachable to a human and includes attachment means selected from the group consisting of an adhesive, a strap, a ring, a cut glove, and a bracelet.

4. The illuminated artificial nail of claim **1** wherein said lamp is selected from the group consisting of an LED, and LCD, a DC incandescent bulb and a laminated flat lamp.

5. The illuminated artificial nail of clam **4** wherein said laminated flat lamp is a flat, laminated, phosphorous-based electroluminescent sheet light source.

6. The illuminated artificial nail of claim **5** wherein said nail includes said base substrate, a flat power cell attached to said top of said base substrate, a reciprocating on/off switch atop said base substrate and circuitry connecting said power cell, said on/off switch and said lamp, said lamp being said flat, laminated, phosphorous-based electroluminescent sheet light source wherein its top laminate layer has said smooth top surface.

7. The illuminated artificial nail of claim **6** wherein said flat, laminated, phosphorous-based electroluminescent sheet light source is flexible at said switch, said switch is located below it and said switch may be turned on and off by pressing said flat, laminated, phosphorous-based electroluminescent sheet light source.

8. The illuminated artificial nail of claim **1** wherein said nail is a disposable nail and includes illumination activation means that may be activated upon application to a nail.

9. An illuminated artificial nail, which comprises:

a) a base substrate having a top and a bottom, and having a top view footprint of a shape and size to fit onto at least a portion of a human nail, and having sufficient flexibility to form into, or having a general curvature of, a human nail, said base substrate being attachable to a human fingernail;

b) an adhesive layer located on said bottom of said base substrate for attachment to a nail;

c) a lamp fixed by and located on top of said base substrate and being separated from said bottom of said base substrate;

d) a power source connected to said lamp to illuminate it, said power source being selected from the group consisting of a power source located between said base substrate and a top member; and a remotely located power source.

e) a top member having a single planar smooth top surface, said top member being selected from the group consisting of a top portion of said lamp, and a cover on top of said lamp and having at least a portion thereof being light transmittable, and,

f) an on/off switch connected to said power source and to said lamp.

10. The illuminated artificial nail of claim **9** wherein said remotely located power source is connected via wiring to said lamp.

11. The illuminated artificial nail of claim **10** wherein said power source has a housing that is attachable to a human and includes attachment means selected from the group consisting of an adhesive, a strap, a ring, a cut glove, and a bracelet.

12. The illuminated artificial nail of claim **9** wherein said lamp is selected from the group consisting of an LED, and LCD, a DC incandescent bulb and a laminated flat lamp.

13. The illuminated artificial nail of clam **12** wherein said laminated flat lamp is a flat, laminated, phosphorous-based electroluminescent sheet light source.

14. The illuminated artificial nail of claim **13** wherein said nail includes said base substrate, a flat power cell attached to said top of said base substrate, a reciprocating on/off switch atop said base substrate and circuitry connecting said power cell, said on/off switch and said lamp, said lamp being said flat, laminated, phosphorous-based electroluminescent sheet light source wherein its top laminate layer has said smooth top surface.

15. The illuminated artificial nail of claim **14** wherein said flat, laminated, phosphorous-based electroluminescent sheet light source is flexible at said switch, said switch is located below it and said switch may be turned on and off by pressing said flat, laminated, phosphorous-based electroluminescent sheet light source.

16. The illuminated artificial nail of claim **9** wherein said nail is a disposable nail and includes illumination activation means that may be activated upon application to a nail.

* * * * *