US009755364B2

(12) **United States Patent**
Barak et al.

(10) **Patent No.: US 9,755,364 B2**
(45) **Date of Patent: Sep. 5, 2017**

(54) **ELECTRICAL PLUG WITH DISENGAGEMENT MEMBER**

(71) Applicant: **Medical Compression Systems (DBN) Ltd.**, Or Akiva (IL)

(72) Inventors: **Jacob Barak**, Oranit (IL); **Vitaly Rondel**, Hadera (IL)

(73) Assignee: **MEDICAL COMPRESSION SYSTEMS** (IL)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **14/812,136**

(22) Filed: **Jul. 29, 2015**

(65) **Prior Publication Data**

US 2016/0064859 A1 Mar. 3, 2016

Related U.S. Application Data

(60) Provisional application No. 62/043,474, filed on Aug. 29, 2014.

(51) **Int. Cl.**

H01R 13/633	(2006.01)
H01R 24/28	(2011.01)
H01R 13/46	(2006.01)
H01R 101/00	(2006.01)

(52) **U.S. Cl.**

CPC ***H01R 13/633*** (2013.01); ***H01R 24/28*** (2013.01); *H01R 13/465* (2013.01); *H01R 2101/00* (2013.01); *H01R 2201/20* (2013.01)

(58) **Field of Classification Search**

CPC H01R 13/633; H01R 13/6335; H01R 13/465; H01R 24/28

USPC 439/483, 694, 484, 669

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,699,722	A	1/1929	Stott	
2,507,092	A	5/1950	Cline	
5,057,036	A	10/1991	Dickie	
5,454,731	A	10/1995	Dickie	
5,567,181	A *	10/1996	Lentz	H01R 13/6335 439/484
5,915,997	A *	6/1999	Lan-Jen	H01R 13/6335 439/694
5,971,733	A *	10/1999	Huang	B29C 45/14639 264/272.15
6,736,666	B2	5/2004	Yu	
7,025,623	B2 *	4/2006	Katsumata	G06K 19/077 361/737
7,052,309	B1	5/2006	Chen	
7,556,524	B2	7/2009	Kuo et al.	
7,625,230	B2	12/2009	Boerner	
D661,651	S	6/2012	Smith et al.	
8,512,069	B2	8/2013	Kao et al.	
8,641,443	B1	2/2014	Moussa et al.	
8,647,133	B2	2/2014	Saur	
D701,835	S	4/2014	Byrne et al.	

(Continued)

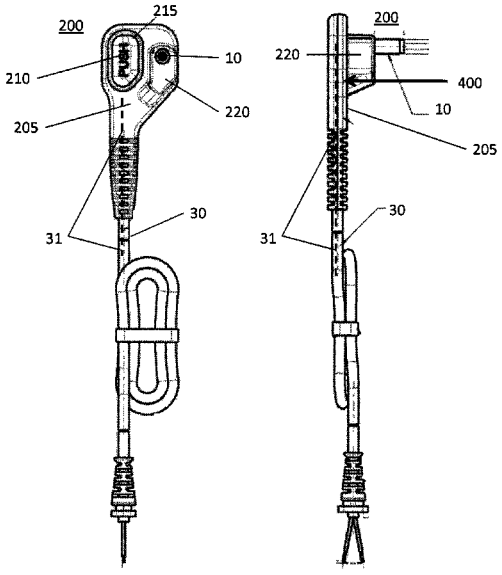
Primary Examiner — Ross Gushi

(74) *Attorney, Agent, or Firm* — Gesmer Updegrove LLP

(57) **ABSTRACT**

An electrical connector for facilitating disconnection from an electrical device by an operator includes an electrical cord and an electrical plug device attached to an end of the electrical cord and having a planar surface. The electrical plug device includes an electrical connector perpendicular to the planar surface of the electrical plug device and a disengagement member. The electrical cord is electrically connected to the electrical connector through the electrical plug device.

15 Claims, 7 Drawing Sheets



(56) **References Cited**

U.S. PATENT DOCUMENTS

D705,738	S	5/2014	Schmidt et al.	
8,727,812	B2	5/2014	Villarreal et al.	
D706,720	S	6/2014	Gette	
D707,181	S	6/2014	Schmidt et al.	
8,764,485	B2	7/2014	Hohner et al.	
8,851,935	B2 *	10/2014	Yoshioka	H01R 4/023 439/604

* cited by examiner

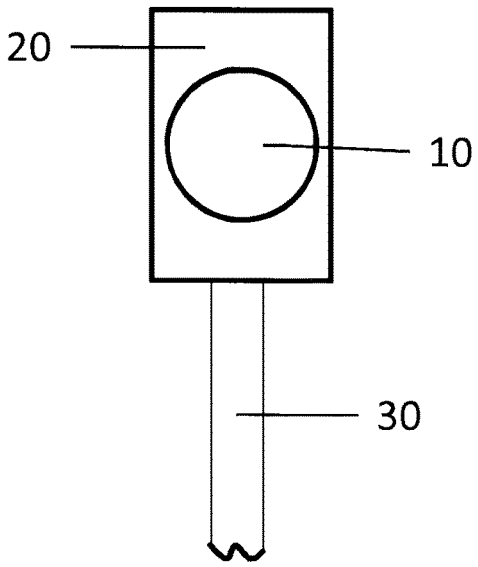


FIGURE 1

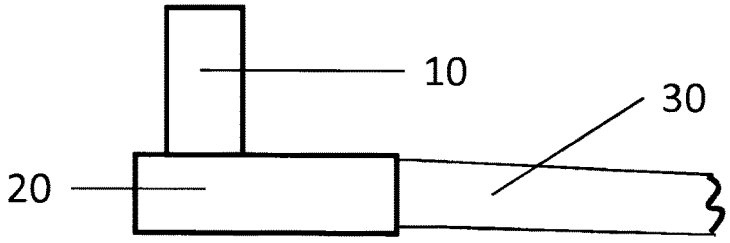


FIGURE 2

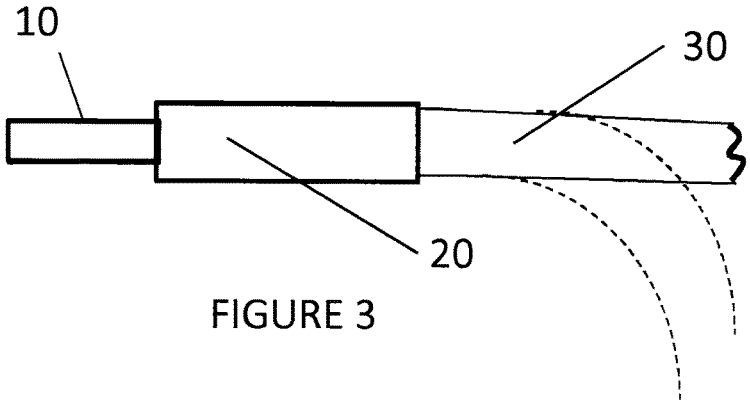


FIGURE 3

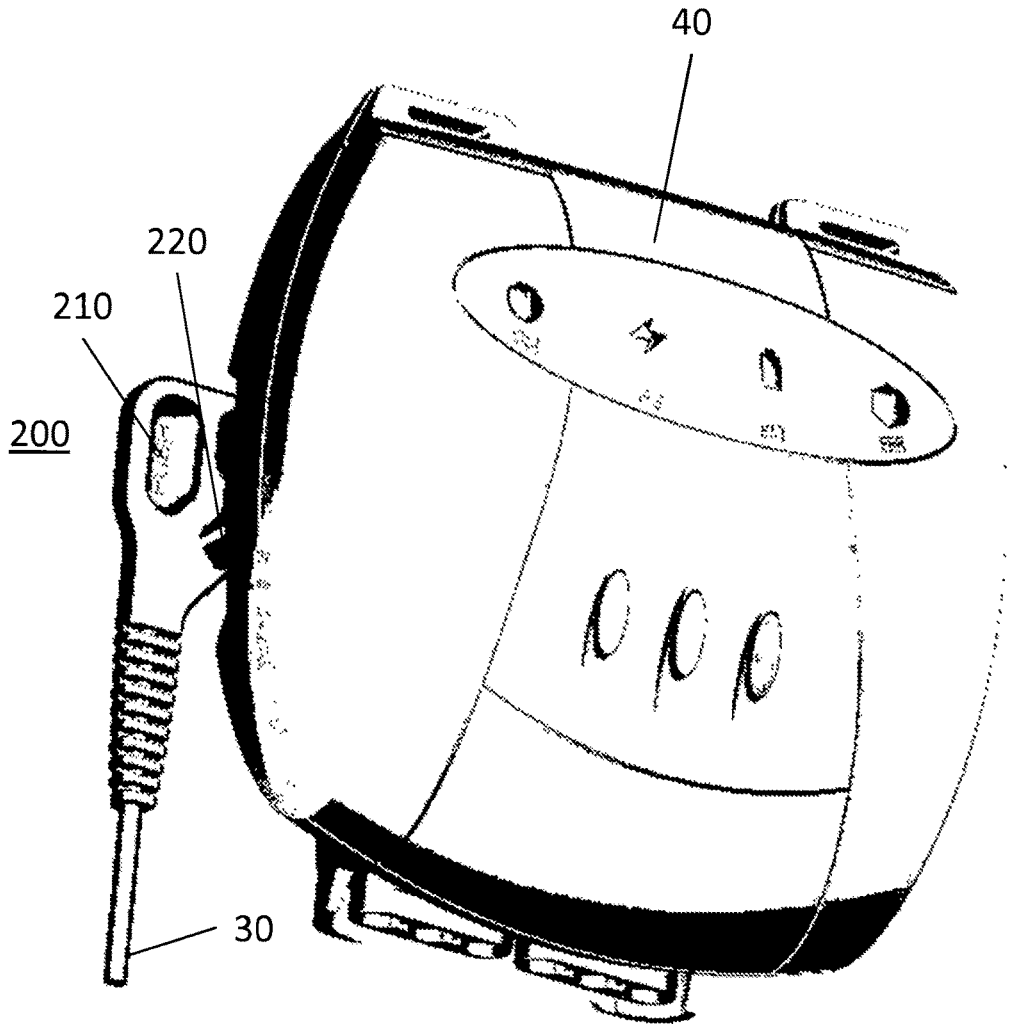


FIGURE 4

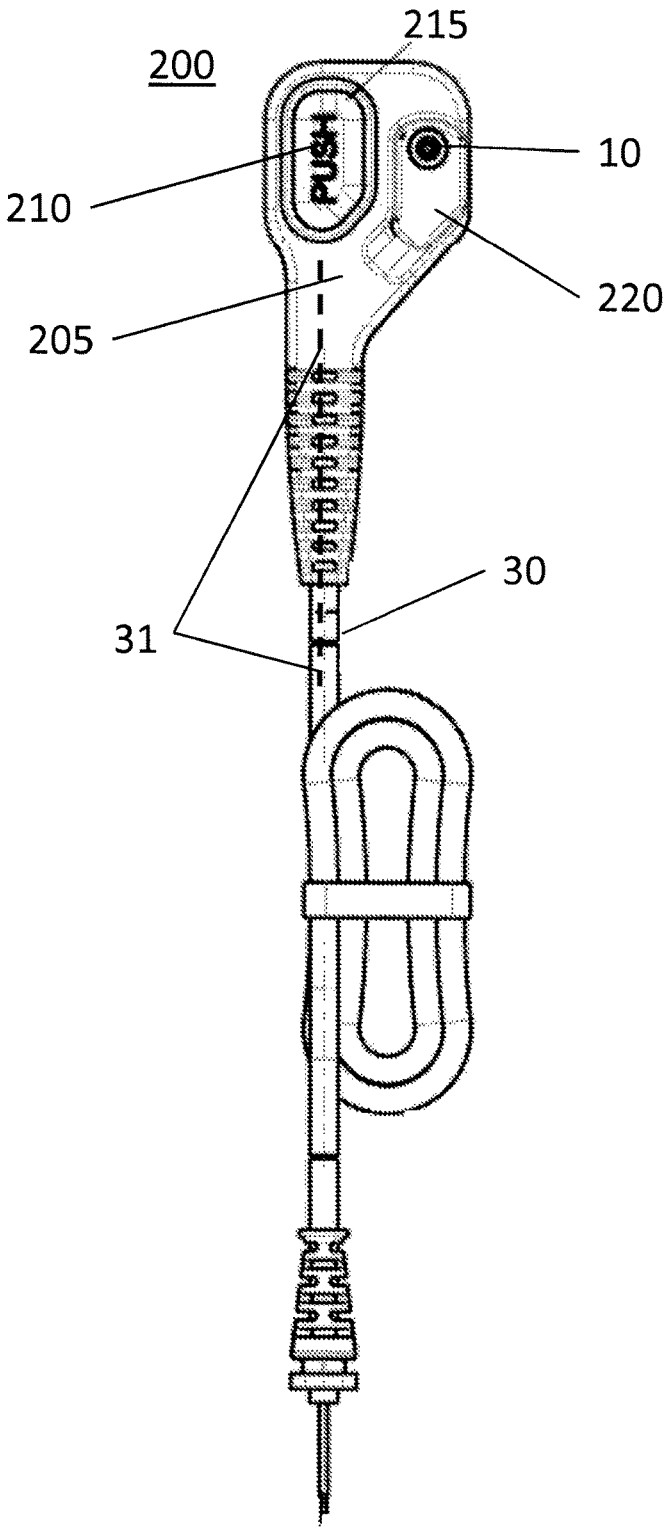


FIGURE 5

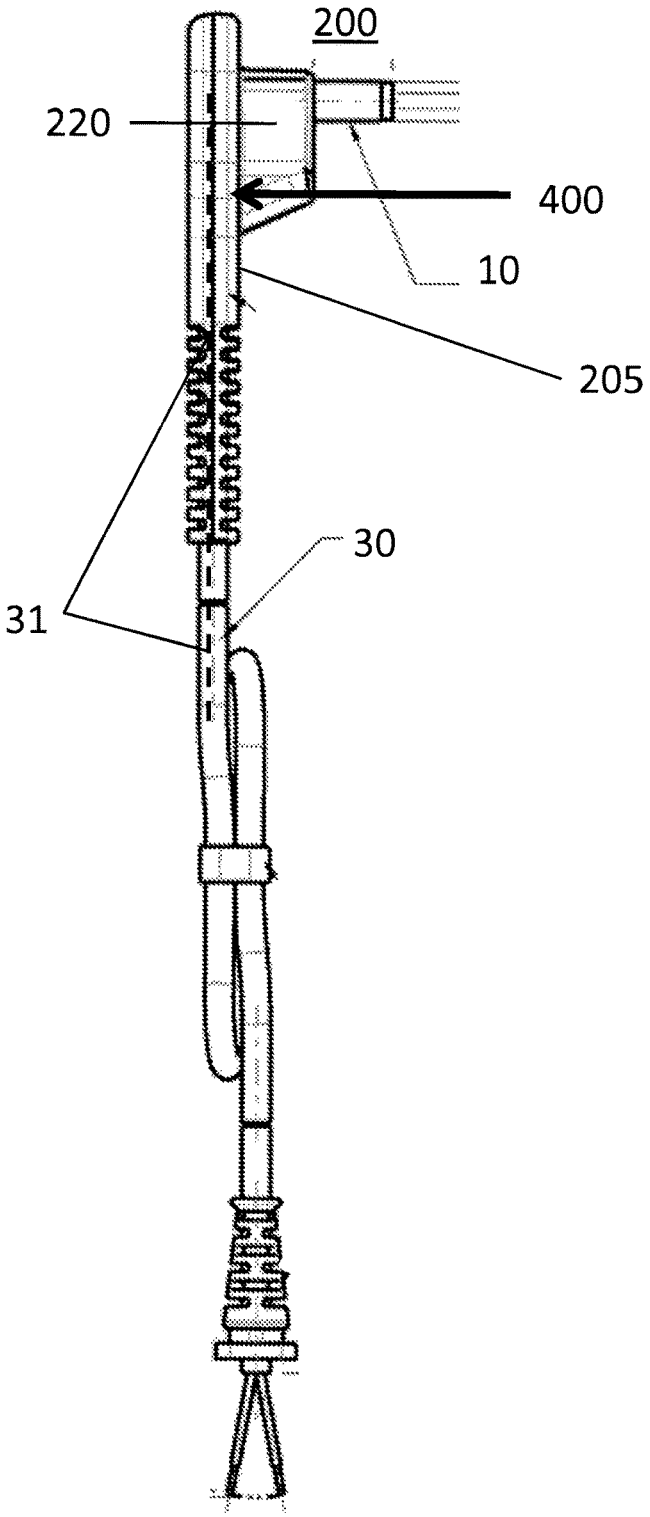


FIGURE 6

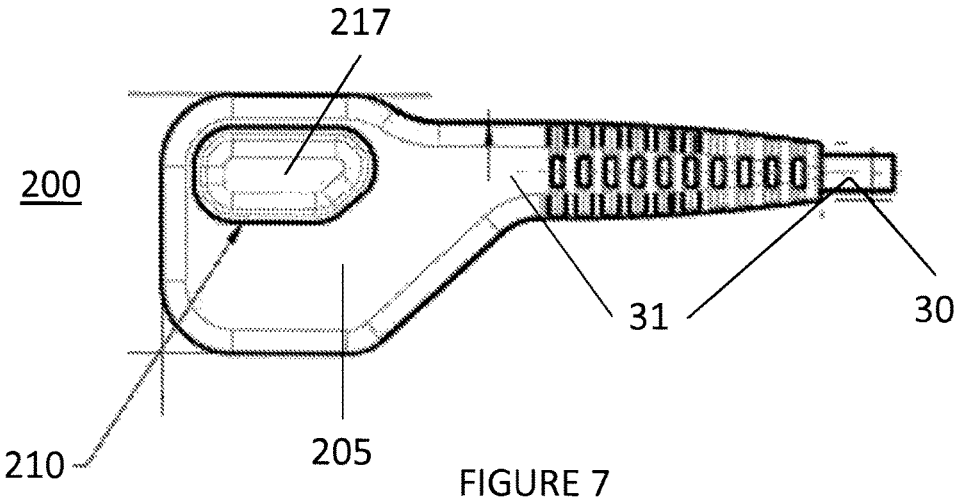


FIGURE 7

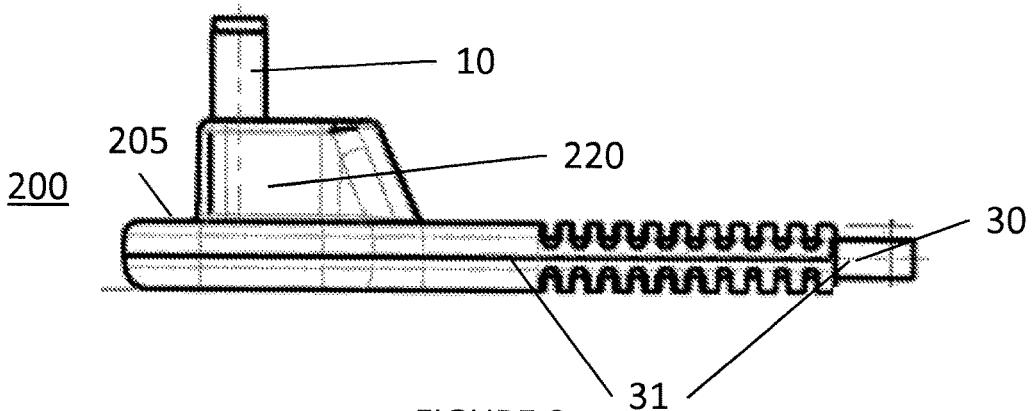


FIGURE 8

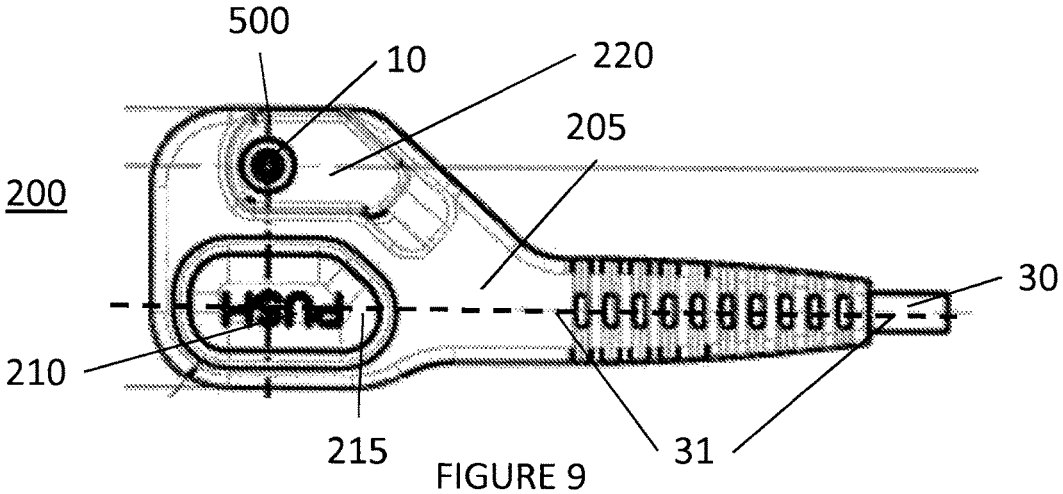


FIGURE 9

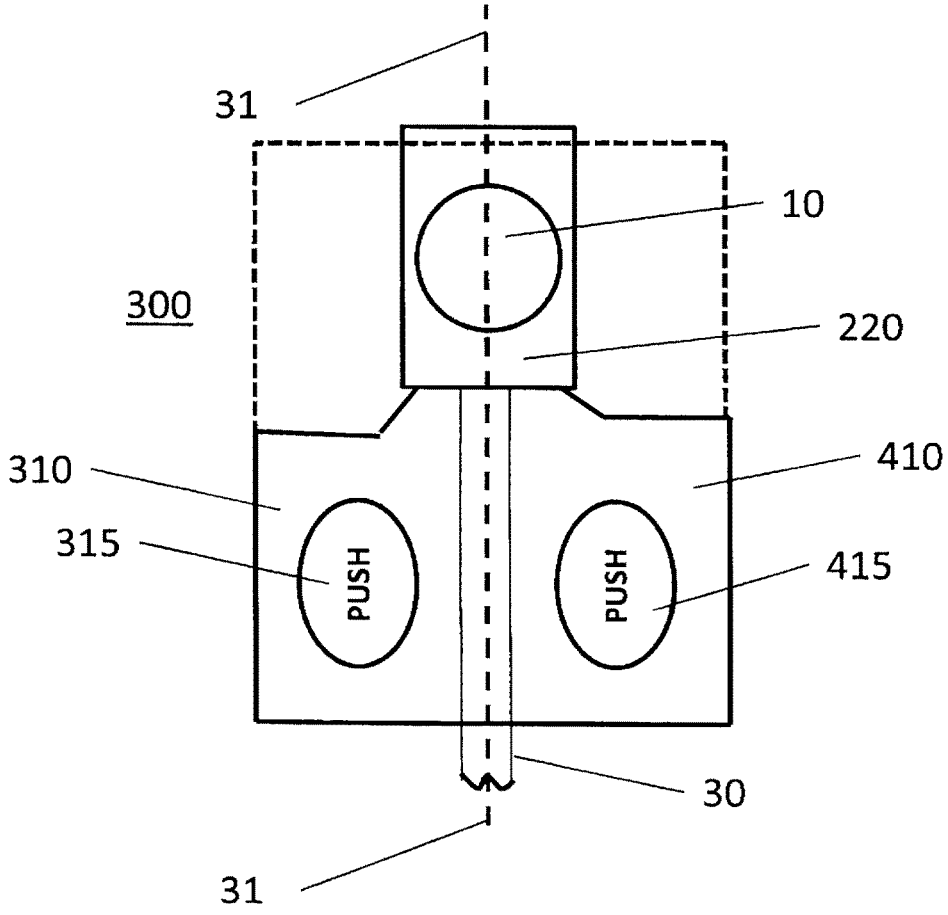


FIGURE 10

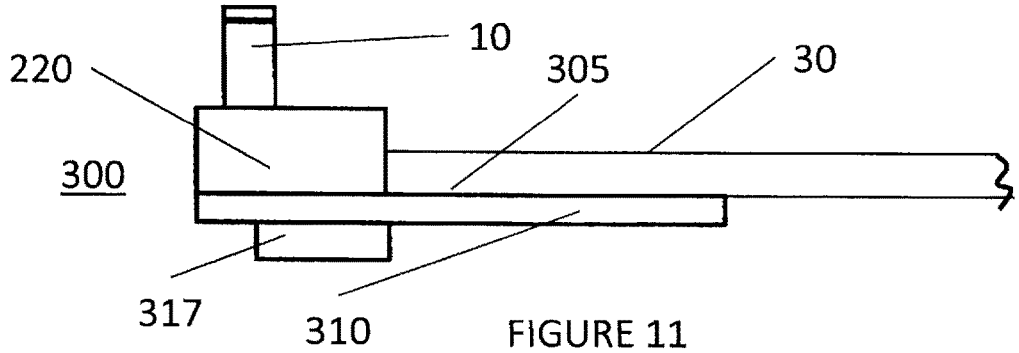


FIGURE 11

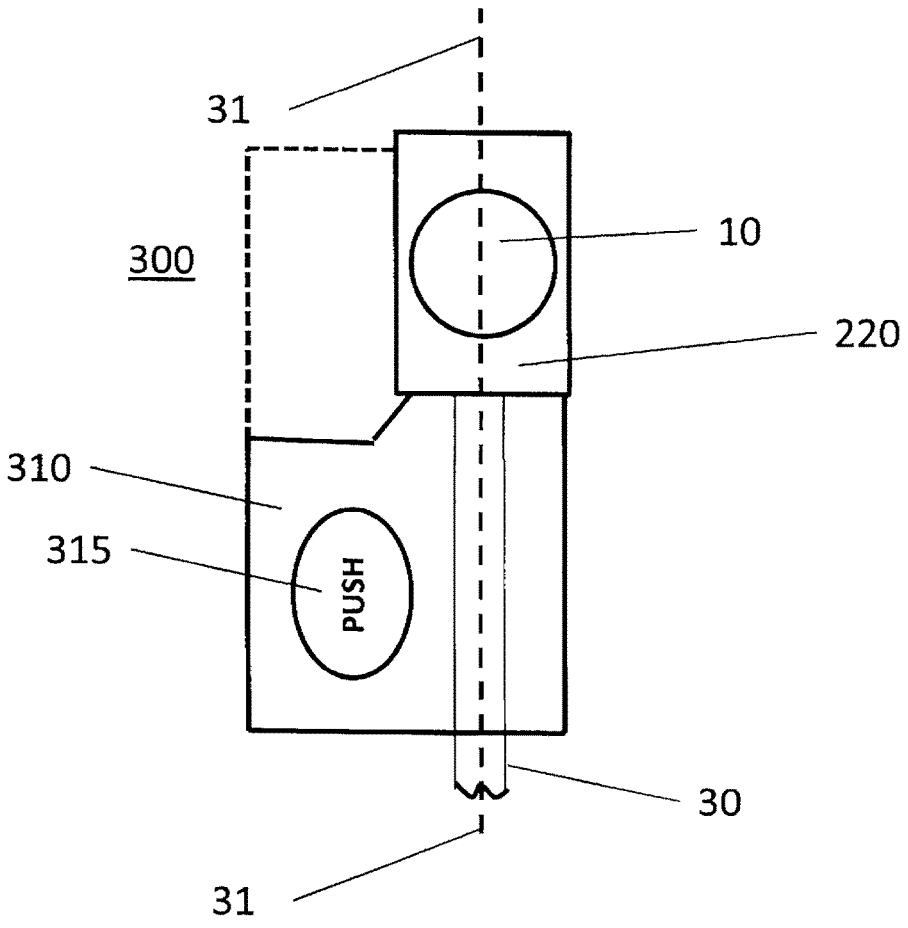


FIGURE 12

ELECTRICAL PLUG WITH DISENGAGEMENT MEMBER

PRIORITY INFORMATION

This application claims priority under 35 U.S.C. §119 to U.S. Provisional Patent Application Ser. No. 62/043,474, which was filed on Aug. 29, 2014. The entire content of U.S. Provisional Patent Application Ser. No. 62/043,474, which was filed on Aug. 29, 2014, is hereby incorporated by reference.

BACKGROUND

Since the inception of the power plug and socket, disconnecting a plug from a socket has evolved as a basic problem. Too often the disconnection of the plug from the socket is accomplished by pulling on the power cord. Grasping the plug and pulling to remove from the socket proves to be particularly detrimental to the structure of the plug.

FIG. **1** illustrates a conventional low profile electrical plug with associated electrical cord **30**. The low profile electrical plug includes a housing **20**, usually made of electrically insulating material, and an electrical plug **10**.

One characteristic of a conventional low profile electrical plug, as illustrated in FIG. **2**, is that the plug or electrical connector **10** is perpendicular or normal to the associated electrical cord **30**. This enables the electrical plug to be used in places of low clearance without putting undue strain on the electrical cord **30**, due to the bending of the electrical cord **30** caused by the low clearance situation.

On the other hand, a conventional non-low profile electrical plug, as illustrated in FIG. **3**, has the electrical connector **10** and housing **20** in a parallel or planar relationship to the associated electrical cord **30**. Thus, in a situation of low clearance, the electrical cord **30** must bend (as shown by the dotted lines), putting an undesired strain on the electrical cord and causing premature fatigue in the cord.

As noted above, a conventional low profile electrical plug has the electrical connectors **10** in a perpendicular or normal relationship to the associated electrical cord **30**, wherein the bend is in the housing **20**, thereby minimizing any undesired strain on the electrical cord **30** and preventing premature fatigue in the cord **30**.

The following U.S. patents are examples of conventional solution for disconnecting a plug from a socket without relying upon the pulling of the cord.

U.S. Pat. No. 1,699,722 discloses an attachment for use in removing an electric plug from its socket. This involves the provision of a handle or bail securely attached to the plug and projecting outwardly at the center where it will naturally be in position to grasp. The entire content of U.S. Pat. No. 1,699,722 is hereby incorporated by reference.

U.S. Pat. No. 2,507,092 discloses plug caps for electrical outlets. The entire content of U.S. Pat. No. 2,507,092 is hereby incorporated by reference.

U.S. Pat. No. 5,057,036 discloses a pivotable pull ring permanently attached to a low profile electrical plug by fashioning a locking stub at the attaching ends of the pull ring. The entire content of U.S. Pat. No. 5,057,036 is hereby incorporated by reference.

U.S. Pat. No. 5,454,731 discloses a molded plastic low profile electrical plug comprising a thin molded plastic main body member, two electrically conductive blade members adapted for insertion into an electrical outlet, and two wire members forming an electrical cord. The entire content of U.S. Pat. No. 5,454,731 is hereby incorporated by reference.

U.S. Pat. No. 6,736,666 discloses electrical plugs capable of being easily removed from their associated receptacles with the aid of a pull ring. The entire content of U.S. Pat. No. 6,736,666 is hereby incorporated by reference.

U.S. Pat. No. 7,052,309 discloses an electric plug including two locating blocks aligned at two sides of the housing thereof to pivotally hold a substantially C-shaped pull ring. The entire content of U.S. Pat. No. 7,052,309 is hereby incorporated by reference.

Although above example provide a mechanism to remove an electrical plug from a socket, example requires a clearance to grasp and pull the plug away from the socket. However, in certain situations, there is not enough clearance to pull the plug away from the socket, it must be pushed.

Therefore, it is desirable to provide an electrical plug which allows a user to disengage the electrical plug from the socket using a pushing action.

Moreover, it is desirable to provide an electrical plug which allows a user to disengage the electrical plug from the socket that lacks sufficient clearance without requiring the user to utilize the cord.

In addition, it is desirable to provide an electrical plug which allows a user to disengage the electrical plug from the socket that lacks sufficient clearance by using a pushing action while not requiring the user to utilize the cord.

BRIEF DESCRIPTION OF THE DRAWINGS

The drawings are only for purposes of illustrating various embodiments and are not to be construed as limiting, wherein:

FIG. **1** illustrates a conventional low profile electrical connector;

FIG. **2** illustrates a side view of the conventional low profile electrical connector of FIG. **1**;

FIG. **3** illustrates a conventional non-low profile electrical connector;

FIG. **4** is an illustration showing an electrical device with a low profile electrical connector having a push action disengagement mechanism;

FIG. **5** is an illustration showing an electrical cord with a low profile electrical connector having a push action disengagement mechanism;

FIG. **6** is an illustration showing a side view of the electrical device with the low profile electrical connector of FIG. **5**;

FIG. **7** is an illustration showing a bottom view of a low profile electrical connector having a push action disengagement mechanism;

FIG. **8** is an illustration showing a side view of the low profile electrical connector of FIG. **7**;

FIG. **9** is an illustration showing a top view of the low profile electrical connector of FIG. **7**;

FIG. **10** is an illustration showing a top view of another low profile electrical connector;

FIG. **11** is an illustration showing a side view of the low profile electrical connector of FIG. **10**; and

FIG. **12** is an illustration showing a top view of another low profile electrical connector.

DETAILED DESCRIPTION

For a general understanding, reference is made to the drawings. In the drawings, like references have been used throughout to designate identical or equivalent elements. It is also noted that the drawings may not have been drawn to

scale and that certain regions may have been purposely drawn disproportionately so that the features and concepts may be properly illustrated.

As illustrated in FIG. **4**, an electrical device **40** receives electrical power via and electrical cord **30** having an electrical plug device **200** at one end of the electrical cord **30**.

The electrical plug device **200** includes a disengagement member **210** and an optional plug reinforcement member **220**. The electrical plug device **200** is a low profile electrical connector, wherein the electrical plug, not shown, is perpendicular or normal to the associated electrical cord **30**. More specifically, the electrical plug, not shown, plugs into the backside of the electrical device **40**.

The actual structure of the electrical plug device **200** will be discussed in more detail below, with respect to FIGS. **5-9**.

As illustrated in FIG. **5**, electrical cord **30** terminates with an electrical plug device **200**. The electrical plug device **200** includes a disengagement member **210**, an electrical plug **10**, and an optional plug reinforcement member **220**.

The electrical cord **30** has a centerline **31**, which runs along a center axis of the electrical cord **30** if the electrical cord **30** is substantially cylindrical. In other words, the centerline **31** represents a center-based line of the electrical cord **30**.

As illustrated in FIG. **5**, the electrical plug **10** is offset from the centerline **31** such that the overall shape of the electrical plug device **200** has a P-shape or D-Shape. The offsetting of the electrical plug **10** from the centerline **31** allows the electrical plug **10** to be plugged into the electrical device with the associated electrical cord **30** being offset from the electrical device.

Moreover, the offsetting of the electrical plug **10** from the centerline **31** allows the disengagement member **210** to be physically cleared from the electrical device, thereby enabling a user to easily engage the disengagement member **210** to disengage the electrical plug **10** from the electrical device.

As noted above, the electrical plug device **200** includes an optional plug reinforcement member **220**, which provides mechanical strength to the electrical plug **10**.

It is noted that the plug reinforcement member **220** may have a unique shape which is associated with a corresponding shape (not shown) on the electrical device to prevent an incorrect electrical cord **30** and electrical plug device **200** assembly from being used with the electrical device. For example, the plug reinforcement member **220** may have a rectangular shape and the corresponding shape on the electrical device would be an indentation for receiving the rectangular shape of the plug reinforcement member **220**.

As illustrated in FIG. **5**, a center point of the disengagement member **210** is located along the centerline **31** of the associated electrical cord **30**. The locating of the center point of the disengagement member **210** along the centerline **31** of the associated electrical cord **30** enables the user to easily engage the disengagement member **210** to disengage the electrical plug **10** from the electrical device.

It is noted that the disengagement member **210** disengages the electrical plug **10** from the electrical device when the users pushes the disengagement member **210** in a direction away from the electrical device. The pushing action prevents a strain from being placed upon the associated electrical cord **30**.

In other words, as illustrated in FIG. **6**, the electrical plug **10** is perpendicular or normal to the centerline **31** of the associated electrical cord **30** in a direction towards engagement with an electrical device. It is also noted that the electrical plug **10** is also perpendicular or normal to a planar surface **205** of the electrical plug device **200**.

The disengagement member **210** disengages the electrical plug **10** from the electrical device when the users pushes the disengagement member **210** in a direction (**400**) perpendicular or normal to the centerline **31** of the associated electrical cord **30**, but opposite of the direction of electrical plug **10**.

As illustrated in FIGS. **4**, **5**, and **9**, the disengagement member **210** may include a physical demarcation **215** (tactilely discernible indentation), on a top side, to inform the user where to apply pushing action so as to disengage the electrical plug **10** from the electrical device.

As illustrated in FIG. **7**, the disengagement member **210** may include a physical demarcation **217** (tactilely discernible protrusion), on a bottom side, to inform the user that pushing action is to be applied to an opposite side so as to disengage the electrical plug **10** from the electrical device.

Moreover, as illustrated in FIGS. **4**, **5**, and **9**, the disengagement member **210** may include a visible (human readable) demarcation, on a top side, to inform the user where to apply pushing action so as to disengage the electrical plug **10** from the electrical device.

FIG. **7** illustrates a bottom view of the electrical cord **30** and electrical plug device **200** assembly, wherein the center point of the disengagement member **210** is located along the centerline **31** of the associated electrical cord **30**. The user would apply a pushing action to an opposite side of the shown electrical cord **30** and electrical plug device **200** assembly to disengage the electrical plug **10** from the electrical device.

FIG. **8** illustrates a side view of the electrical cord **30** and electrical plug device **200** assembly, wherein the electrical plug **10** is perpendicular or normal to a planar surface **205** of the electrical plug device **200** and perpendicular or normal to the centerline **31** of the associated electrical cord **30** in a direction towards engagement with an electrical device.

As illustrated in FIG. **8**, the optional plug reinforcement member **220**, which provides mechanical strength to the electrical plug **10**, may also be perpendicular or normal to a planar surface **205** of the electrical plug device **200** and perpendicular or normal to the centerline **31** of the associated electrical cord **30** in a direction towards engagement with an electrical device.

FIG. **9** illustrates a top view of the electrical cord **30** and electrical plug device **200** assembly, wherein the electrical plug **10** is perpendicular or normal to a planar surface **205** of the electrical plug device **200** and perpendicular or normal to the centerline **31** of the associated electrical cord **30** in a direction towards engagement with an electrical device.

As illustrated in FIG. **9**, the optional plug reinforcement member **220**, which provides mechanical strength to the electrical plug **10**, may also be perpendicular or normal to a planar surface **205** of the electrical plug device **200** and perpendicular or normal to the centerline **31** of the associated electrical cord **30** in a direction towards engagement with an electrical device.

Furthermore, as illustrated in FIG. **9**, the electrical plug **10** is offset from the centerline **31** such that the overall shape of the electrical plug device **200** has a P-shape or D-Shape, and the disengagement member **210** is located along the centerline **31** of the associated electrical cord **30**.

The locating of the center point of the disengagement member **210** along the centerline **31** of the associated electrical cord **30** and the offsetting of the electrical plug **10** from the centerline **31** enables the user to easily engage the

disengagement member **210** to disengage the electrical plug **10** from the electrical device and allows the electrical plug **10** to be plugged into the electrical device with the associated electrical cord **30** being offset from the electrical device.

As shown in FIG. **9**, a line **500**, passing through the center point of the disengagement member **210** and a center point of the electrical plug **10** intersects the centerline **31** of the electrical cord **30** to form a substantially orthogonal angle.

The alignment of the center point of the disengagement member **210** and the center point of the electrical plug **10**, as illustrated in FIG. **9**, allows the disengagement of the electrical plug **10** from an electrical device with ease and minimal stress upon the electrical cord **30** and/or the electrical plug device **200**.

It is noted that although the electrical plug **10** has been illustrated as a male connector, the electrical plug device **200** could be modified to replace the male connector with a female connector to receive a male connector located on the electrical device.

It is also noted that although the electrical plug **10** has been illustrated as a male connector, the electrical plug device **200** could be modified to utilize other types of removal electrical connectors.

It is noted that the disengagement member **210** and the optional plug reinforcement member **220** may be integrally formed or separate components fused together in forming the electrical plug device **200**.

It is further noted that the disengagement member **210** and the optional plug reinforcement member **220** may be formed of rigid electrically insulating material.

With respect to FIG. **10**, electrical cord **30** terminates with an electrical plug device **300**. The electrical plug device **300** includes first disengagement member **310**, second disengagement member **410**, an electrical plug **10**, and an optional plug reinforcement member **220**.

The electrical cord **30** has a centerline **31**, which runs along a center axis of the electrical cord **30** if the electrical cord **30** is substantially cylindrical. In other words, the centerline **31** represents a center-based line of the electrical cord **30**.

As illustrated in FIG. **10**, the electrical plug **10** is located along or on the centerline **31** and the first disengagement members **310** and the second disengagement member **410** are offset from the centerline **31** such that the overall shape of the electrical plug device **300** has an upside down T-shape. As illustrated in FIG. **10**, the first disengagement member **310** may include a physical demarcation **315** (tactilely discernible indentation), on a top side, to inform the user where to apply pushing action so as to disengage the electrical plug **10** from the electrical device and the second disengagement member **410** may include a physical demarcation **415** (tactilely discernible indentation), on a top side, to inform the user where to apply pushing action so as to disengage the electrical plug **10** from the electrical device. Moreover, as illustrated in FIG. **10**, the first disengagement member **310** may include a visible (human readable) demarcation, on a top side, to inform the user where to apply pushing action so as to disengage the electrical plug **10** from the electrical device and the second disengagement member **410** may include a visible (human readable) demarcation, on a top side, to inform the user where to apply pushing action so as to disengage the electrical plug **10** from the electrical device.

It is noted that the first disengagement members **310** and the second disengagement member **410** may be expanded (as shown by the dotted line) so that the overall shape of the electrical plug device **300** is basically square or rectangular.

The offsetting of the first disengagement members **310** and the second disengagement member **410** from the centerline **31** allows the electrical plug **10** to be plugged into the electrical device with the associated electrical cord **30** being orthogonal to the electrical device.

It is noted that the first disengagement member **310** and the second disengagement member **410** may be integrally formed. It is further noted that the associated electrical cord **30** may be formed in the integrally formed first disengagement members **310** and second disengagement member **410** or the associated electrical cord **30** may not be physically connected to the first disengagement members **310** and the second disengagement member **410**.

FIG. **11** illustrates a side view of the electrical cord **30** and electrical plug device **300** assembly, wherein the electrical plug **10** is perpendicular or normal to a planar surface **305** of the electrical plug device **300** and perpendicular or normal to the centerline **31** of the associated electrical cord **30** in a direction towards engagement with an electrical device.

As illustrated in FIG. **11**, the optional plug reinforcement member **220**, which provides mechanical strength to the electrical plug **10**, may also be perpendicular or normal to a planar surface **305** of the electrical plug device **300** and perpendicular or normal to the centerline **31** of the associated electrical cord **30** in a direction towards engagement with an electrical device. As illustrated in FIG. **11**, the first disengagement member **310** may include a physical demarcation **317** (tactilely discernible protrusion), on a bottom side, to inform the user that pushing action is to be applied to an opposite side so as to disengage the electrical plug **10** from the electrical device.

As illustrated in FIG. **12**, the electrical plug **10** is located along or on the centerline **31** and the disengagement member **310** is offset from the centerline **31** such that the overall shape of the electrical plug device **300** has an upside down P-shape or a d-shape. As illustrated in FIG. **12**, the disengagement member **310** may include a physical demarcation **315** (tactilely discernible indentation), on a top side, to inform the user where to apply pushing action so as to disengage the electrical plug **10** from the electrical device. Moreover, as illustrated in FIG. **12**, the disengagement member **310** may include a visible (human readable) demarcation, on a top side, to inform the user where to apply pushing action so as to disengage the electrical plug **10** from the electrical device.

It is noted that the disengagement member **310** may be expanded (as shown by the dotted line) so that the overall shape of the electrical plug device **300** is basically rectangular.

The offsetting of the disengagement member **310** from the centerline **31** allows the electrical plug **10** to be plugged into the electrical device with the associated electrical cord **30** being orthogonal to the electrical device.

It is noted that the disengagement member **310** may be integrally formed with the associated electrical cord **30** or the associated electrical cord **30** may not be physically connected to the disengagement member **310**.

It is noted that although FIG. **12** illustrates the disengagement member **310** offset to the left of the centerline **31** of the associated electrical cord **30**, the disengagement member **310** may also be offset to the right of the centerline **31** of the associated electrical cord **30**.

In summary, an electrical connector for facilitating disconnection from an electrical device by an operator includes

an electrical cord having a centerline and an electrical plug device attached to an end of the electrical cord and having a planar surface. The electrical plug device includes an electrical connector perpendicular to the planar surface of the electrical plug device, and a disengagement member located along the centerline of the electrical cord. The electrical connector is offset from the centerline of the electrical cord. The electrical cord is electrically connected to the electrical connector through the electrical plug device.

The electrical plug device may include plug reinforcement member for the electrical connector, the plug reinforcement member being offset from the centerline of the electrical cord.

The disengagement member may include a tactilely discernible indentation to inform a user where to apply a pushing action so as to disengage the electrical connector from the electrical device.

The disengagement member may include a tactilely discernible protrusion to inform a user that a pushing action is to be applied to an opposite side so as to disengage the electrical connector from the electrical device.

The disengagement member may include a visible human readable demarcation to inform a user where to apply a pushing action so as to disengage the electrical connector from the electrical device.

A line, passing through a center point of the disengagement member and a center point of the electrical connector may intersect the centerline of the electrical cord to form a substantially orthogonal angle or orthogonal angle.

A center point of the disengagement member may be located along the centerline of the electrical cord.

An electrical connector for facilitating disconnection from an electrical device by an operator includes an electrical cord having a centerline and an electrical plug device attached to an end of the electrical cord and having a planar surface. The electrical plug device includes an electrical connector perpendicular to the planar surface of the electrical plug device and a disengagement member. The electrical connector is located along the centerline of the electrical cord. The disengagement member is offset from the centerline of the electrical cord. The electrical cord is electrically connected to the electrical connector through the electrical plug device.

The electrical plug device may include plug reinforcement member for the electrical connector, the plug reinforcement member being offset from the centerline of the electrical cord.

The disengagement member may include a tactilely discernible indentation to inform a user where to apply a pushing action so as to disengage the electrical connector from the electrical device.

The disengagement member may include a tactilely discernible protrusion to inform a user that a pushing action is to be applied to an opposite side so as to disengage the electrical connector from the electrical device.

The disengagement member may include a visible human readable demarcation to inform a user where to apply a pushing action so as to disengage the electrical connector from the electrical device.

An electrical connector for facilitating disconnection from an electrical device by an operator includes an electrical cord having a centerline and an electrical plug device attached to an end of the electrical cord and having a planar surface. The electrical plug device includes an electrical connector perpendicular to the planar surface of the electrical plug device, a first disengagement member, and a second disengagement member. The electrical connector is located along the centerline of the electrical cord. The first and second disengagement members are offset from the centerline of the electrical cord. The electrical cord is electrically connected to the electrical connector through the electrical plug device.

The electrical plug device may include a plug reinforcement member for the electrical connector, the plug reinforcement member being offset from the centerline of the electrical cord.

The disengagement member may include a tactilely discernible indentation to inform a user where to apply a pushing action so as to disengage the electrical connector from the electrical device.

The disengagement member may include a tactilely discernible protrusion to inform a user that a pushing action is to be applied to an opposite side so as to disengage the electrical connector from the electrical device.

The disengagement member may include a visible human readable demarcation to inform a user where to apply a pushing action so as to disengage the electrical connector from the electrical device.

A line, passing through a center point of the disengagement member and a center point of the electrical connector may intersect the centerline of the electrical cord to form a substantially orthogonal angle.

The first disengagement member and the second disengagement member may be an integrally formed disengagement member; the first disengagement member being offset to a first side from the centerline of the electrical cord and the second disengagement member being offset to a second side from the centerline of the electrical cord such that the first disengagement member and the second disengagement member are co-planar.

It will be appreciated that various of the above-disclosed and other features and functions, or alternatives thereof, may be desirably combined into many other different systems or applications. Also that various presently unforeseen or unanticipated alternatives, modifications, variations or improvements therein may be subsequently made by those skilled in the art which are also intended to be encompassed by the following claims.

What is claimed is:

1. An electrical connection device for providing electrical power to an electrical device, consisting essentially of:

an electrical cord having a centerline; and

an electrical plug device attached to an end of said electrical cord and having a first planar surface and a second planar surface;

said electrical plug device including,

an electrical connector, located on said first planar surface of said electrical plug device and being perpendicular to said first planar surface of said electrical plug device, for physically and electrically connecting said electrical plug device to the electrical device, and

a disengagement member located on said centerline of said single electrical cord;

said disengagement member having a first surface, said first surface of said disengagement member being a portion of said first planar surface of said electrical plug device;

said disengagement member having a second surface, said second surface of said disengagement member being a portion of said second planar surface of said electrical plug device;

said single electrical connector being offset from said centerline of said electrical cord;

said disengagement member having a center point, said center point being located on said centerline of said electrical cord;

said electrical cord being electrically connected to said electrical connector through said electrical plug device;

said disengagement member including an indentation in said first surface of said disengagement member identifying a location on said first surface of said disengagement member where to apply a force, the applied force being both orthogonal to said first planar surface of said disengagement member and parallel to said electrical connector.

2. The electrical connection device, as claimed in claim **1**, wherein said electrical plug device includes plug reinforcement member for said electrical connector, said plug reinforcement member being offset from said centerline of said electrical cord.

3. The electrical connection device, as claimed in claim **1**, wherein said disengagement member includes a protrusion in said second surface of said disengagement member.

4. The electrical connection device, as claimed in claim **3**, wherein said indentation includes a bottom surface below said first surface of said disengagement member;

said disengagement member including a demarcation within said bottom surface of said indentation of said disengagement member identifying a location on said first surface of said disengagement member where to apply a force, the applied force being both orthogonal to said first surface of said disengagement member and parallel to said electrical connector.

5. The electrical connection device, as claimed in claim **1**, wherein said indentation includes a bottom surface below said first surface of said disengagement member;

said disengagement member including a demarcation within said bottom surface of said indentation of said disengagement member identifying a location on said first surface of said disengagement member where to apply a force, the applied force being both orthogonal to said first surface of said disengagement member and parallel to said electrical connector.

6. The electrical connection device, as claimed in claim **1**, wherein a line, passing through said center point of said disengagement member and a center point of said electrical connector intersects said centerline of said electrical cord to form a substantially orthogonal angle.

7. The electrical connection device, as claimed in claim **1**, wherein a line, passing through said center point of said disengagement member and a center point of said electrical connector intersects said centerline of said electrical cord to form an orthogonal angle.

8. An electrical connection device for providing electrical power to an electrical device, consisting essentially of:

an electrical cord having a centerline; and

an electrical plug device attached to an end of said electrical cord and having a first planar surface and a second planar surface;

said electrical plug device including,

an electrical connector, located on said first planar surface of said electrical plug device and being perpendicular to said first planar surface of said electrical plug device, for physically and electrically connecting said electrical plug device to the electrical device, and

a disengagement member;

said disengagement member having a first surface, said first surface of said disengagement member being a portion of said first planar surface of said electrical plug device;

said disengagement member having a second surface, said second surface of said disengagement member being a portion of said second planar surface of said electrical plug device;

said electrical connector being located on said centerline of said electrical cord;

said disengagement member being offset from said centerline of said electrical cord;

said electrical cord being electrically connected to said electrical connector through said electrical plug device;

said disengagement member includes an indentation in said first surface of said disengagement member identifying a location on said first surface of said disengagement member where to apply a force, the applied force being both orthogonal to said first surface of said disengagement member and parallel to said electrical connector;

said indentation of said disengagement member not intersecting said centerline of said electrical cord.

9. The electrical connection device, as claimed in claim **8**, wherein said disengagement member includes a protrusion in said second surface of said disengagement member.

10. The electrical connection device, as claimed in claim **9**, wherein said indentation includes a bottom surface below said first surface of said disengagement member;

said disengagement member including a demarcation within said bottom surface of said indentation of said disengagement member identifying a location on said first surface of said disengagement member where to apply a force, the applied force being both orthogonal to said first surface of said disengagement member and parallel to said electrical connector.

11. The electrical connection device, as claimed in claim **8**, wherein said indentation includes a bottom surface below said first surface of said disengagement member;

said disengagement member including a demarcation within said bottom surface of said indentation of said disengagement member identifying a location on said first surface of said disengagement member where to apply a force, the applied force being both orthogonal to said first surface of said disengagement member and parallel to said electrical connector.

12. An electrical connection device for providing electrical power to an electrical device, consisting essentially of:

an electrical cord having a centerline; and

an electrical plug device attached to an end of said electrical cord and having a first planar surface and a second planar surface;

said electrical plug device including,

an electrical connector, located on said first planar surface of said electrical plug device and being perpendicular to said first planar surface of said electrical plug device, for physically and electrically connecting said electrical plug device to the electrical device,

a first disengagement member, and

a second disengagement member;

said first disengagement member having a first surface, said first surface of said first disengagement member being a portion of said first planar surface of said electrical plug device;

said first disengagement member having a second surface, said second surface of said first disengagement member being a portion of said second planar surface of said electrical plug device;

said second disengagement member having a third surface, said third surface of said second disengagement member being a portion of said first planar surface of said electrical plug device;

said second disengagement member having a fourth surface, said fourth surface of said second disengagement member being a portion of said second planar surface of said electrical plug device;

said electrical connector being located on said centerline of said electrical cord;

said first disengagement members being offset from said centerline of said electrical cord;

said second disengagement member being offset from said centerline of said electrical cord;

said electrical cord being electrically connected to said electrical connector through said electrical plug device;

said first disengagement member including first indentation in said first surface of said first disengagement member to identify a location on said first surface of said first disengagement member where to apply a force, the applied force being both orthogonal to said first surface of said first disengagement member and parallel to said electrical connector;

said second disengagement member including second indentation in said third surface of said second disengagement member to identify a location on said third surface of said second disengagement member where to apply a force, the applied force being both orthogonal to said third surface of said second disengagement member and parallel to said electrical connector;

said first indentation of said first disengagement member not intersecting said centerline of said electrical cord;

said second indentation of said second disengagement member not intersecting said centerline of said electrical cord.

13. The electrical connection device, as claimed in claim **12**, wherein said first disengagement member includes a protrusion in said second surface of said first disengagement member; and

said second disengagement member includes a protrusion in said fourth surface of said second disengagement member.

14. The electrical connection device, as claimed in claim **13**, wherein said disengagement member includes a demarcation in said first surface of said disengagement member identifying a location on said first surface of said first disengagement member where to apply a force, the applied force being both orthogonal to said first surface of said disengagement member and parallel to said electrical connector; and

said second disengagement member includes a demarcation in said third surface of said second disengagement member identifying a location on said third surface of said second disengagement member where to apply a force, the applied force being both orthogonal to said third surface of said second disengagement member and parallel to said electrical connector.

15. The electrical connection device, as claimed in claim **12**, wherein said disengagement member includes a demarcation in said first surface of said disengagement member identifying a location on said first surface of said first disengagement member where to apply a force, the applied force being both orthogonal to said first surface of said disengagement member and parallel to said electrical connector; and

said second disengagement member includes a demarcation in said third surface of said second disengagement member identifying a location on said third surface of said second disengagement member where to apply a force, the applied force being both orthogonal to said third surface of said second disengagement member and parallel to said electrical connector.

* * * * *