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Counsel for Advanced Connection Technology Inc.

Fee paid SI (14)

United States District Court
Northern District of California

Advanced Connection Technology Inc.,

Plaintiff,

vs.

Canon U.S.A, Inc.

Defendant

E-filing

Case No. CV 12- 6496 MMC

Complaint for Patent Infringement

Demand for Jury Trial

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Complaint

Plaintiff Advanced Connection Technology, Inc. ("ACT"), in support of its Complaint against Canon U.S.A. Inc. ("Canon"), states as follows:

Parties

1. ACT is a Taiwanese corporation with its principle place of business located at 10F., No.69, Sec. 2, Zhongzheng E. Rd., Danshui Dist., New Taipei City 251, Taiwan(R.O.C.).

2. Upon information and belief, Canon is a New York corporation with its principal place of business at One Canon Plz, Lake Success, New York, 11042.

Jurisdiction and Venue

3. This action arises out of the Patent Laws of the United States, 35 U.S.C. §§ 1 *et. seq.*

4. This Court has subject matter jurisdiction pursuant 28 U.S.C. §§ 1331 and 1338 (a).

5. This court has personal jurisdiction over Canon because Canon has sold its products, including its infringing products in California and in this District and/or in the stream of commerce with knowledge that they would be sold in California and in this District. Upon information and belief, such sales are substantial, continuous, and systematic. Canon has committed tortious acts (e.g., patent infringement) in this District.

6. Venue is appropriate in this District under 28 U.S.C. § 1391.

Intradistrict Assignment

7. This case is appropriate for District-wide assignment under Civil Local Rule 3-2(c) because the claims in this Complaint arise under 35 U.S.C. §§ 1 *et. seq.*, which is codified with the patent statutes.

Background

8. On June 12, 2000, U.S. Patent No. 7,128,617 ("the '617 Patent"), which is entitled "Electrical Socket Assembly and Plug Connector Coupled Thereto," was issued to ACT. A copy of the '617 Patent is attached hereto as Exhibit A. ACT has owned the patent throughout the period of Canon's infringement and still owns the patent. ACT marks the '617 Patent's number on all ACT products that embody the invention claimed in the '617 Patent.

Count 1: Canon's Patent Infringement

9. ACT incorporates by reference all above allegations.

10. Canon has infringed and continues to infringe the '617 Patent, in violation of 35 U.S.C. § 271, by making, using, selling, offering for sale within the United States, or importing into the United States, products that embody the invention claimed in the '617 Patent.

11. Canon and/or Canon' suppliers and/or distributors have been on notice of the existence of the '617 Patent. Upon information and belief, Canon' infringement of the '617 Patent has been willful and deliberate.

12. Canon' past and continued infringement of the '617 Patent has damaged and will damage ACT. ACT is entitled to recover from Canon damages in an amount to be proven at trial.

13. Canon' acts of infringement have caused and will continue to cause irreparable harm to ACT unless and until enjoined by this Court.

Prayer for Relief

WHEREFORE, ACT prays that this Court enter judgment:

1. Declaring that Canon has infringed the '617 Patent;

2. Declaring that Canon has willfully infringed the '617 Patent, entitling ACT to enhanced damages under 35 U.S.C. § 284;

3. Permanently enjoining Canon from infringing the '617 Patent;

4. Awarding ACT damages adequate to compensate it for Canon' infringement, but no less than a reasonable royalty, with interest, including pre-judgment and post-judgment interest; and

5. Declaring that this case is an exceptional case under 35 U.S.C. § 285 and that ACT is entitled to recover its reasonable attorneys fees;

6. Any such other relief as this Court deems just and proper.

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DEMAND FOR JURY TRIAL

ACT respectfully demands a jury trial for all issues so triable.

Date: November 28, 2012

/s/ Jing Hong Cherng
Mount, Spelman & Fingerman, P.C.
Counsel for Advanced Connection Technology Inc.

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Exhibit A

US007128617B2

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

(10) **Patent No.: US 7,128,617 B2**
(45) **Date of Patent: Oct. 31, 2006**

(54) **ELECTRICAL SOCKET ASSEMBLY AND PLUG CONNECTOR COUPLED THERETO**

(75) Inventors: **Eric Wang**, Taipei Hsien (TW); **Ming-Chung Wang**, Taipei Hsien (TW)

(73) Assignee: **Advanced Connection Technology Inc.**, Taipei Hsien (TW)

(*) 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.: **11/015,856**

(22) Filed: **Dec. 16, 2004**

(65) **Prior Publication Data**

US 2006/0134983 A1 Jun. 22, 2006

(51) **Int. Cl.**
H01R 24/00 (2006.01)

(52) **U.S. Cl.** **439/660**; 439/607; 439/939

(58) **Field of Classification Search** 439/607, 439/660, 939

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,086,430 A * 7/2000 Amoni et al. 439/680
6,113,426 A * 9/2000 Lin 439/607

* cited by examiner

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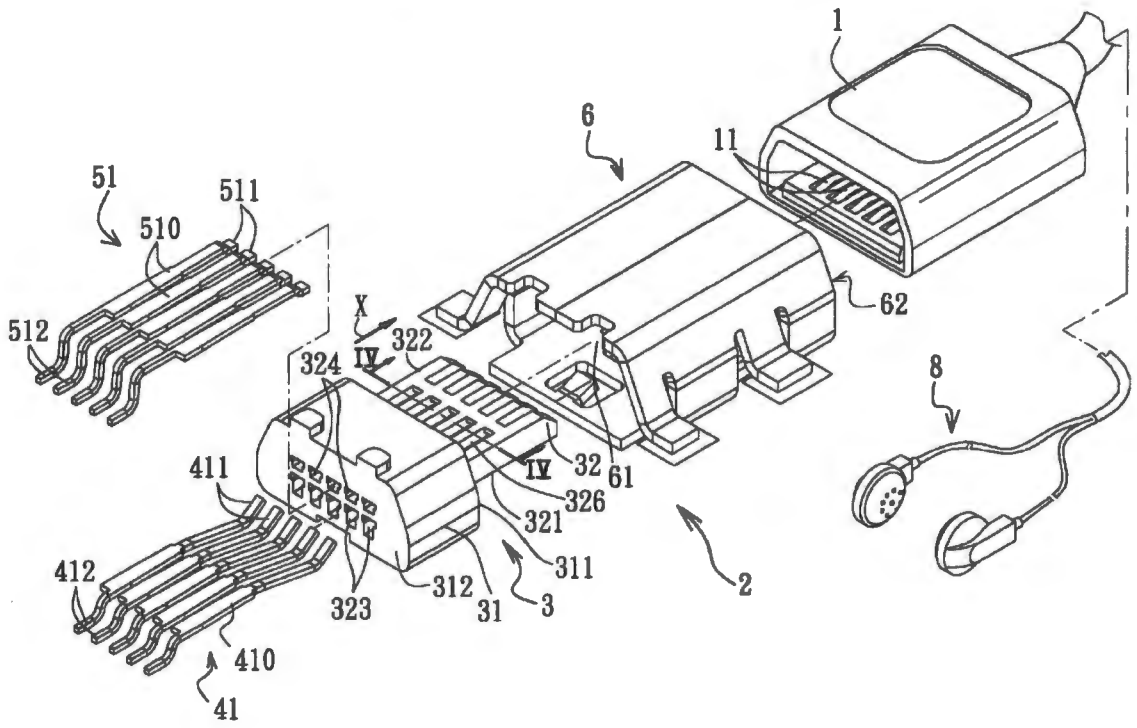
(74) *Attorney, Agent, or Firm*—Darby & Darby

(57) **ABSTRACT**

An electrical socket assembly includes an insulating body, a plurality of first terminals, and a plurality of second terminals. The insulating body has first terminal grooves formed on a lower side thereof, and second terminal grooves formed on an upper side thereof. The first terminals are respectively positioned in the first terminal grooves for transmitting non-USB-compliant signals, and the second terminals are respectively positioned in the second terminal grooves for transmitting and receiving USB-compliant signals. The electrical socket assembly may be coupled with a standard USB plug connector for transmission of the USB-compliant signals, and with another plug connector for transmission of the non-USB-compliant signals.

7 Claims, 3 Drawing Sheets



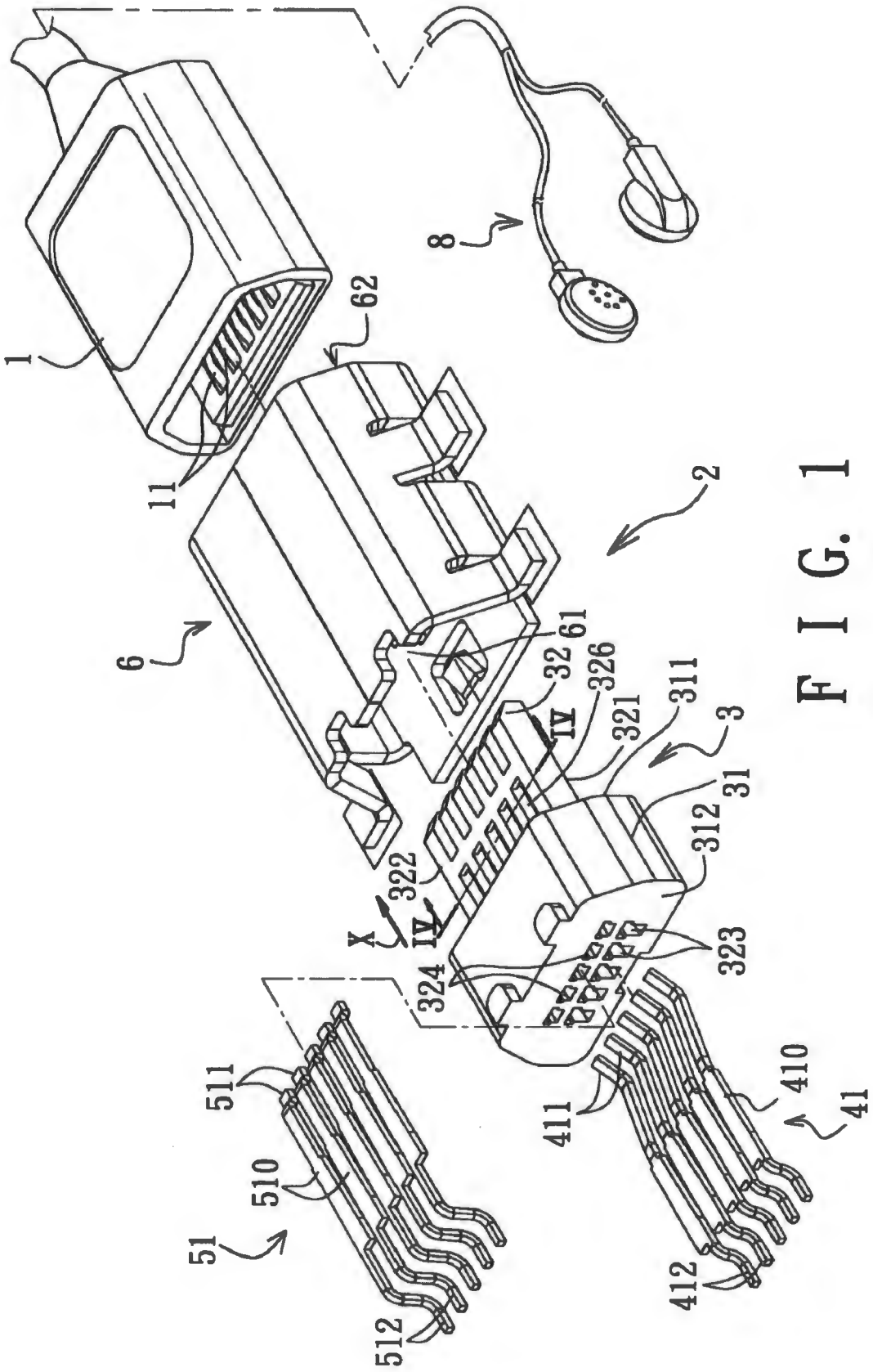

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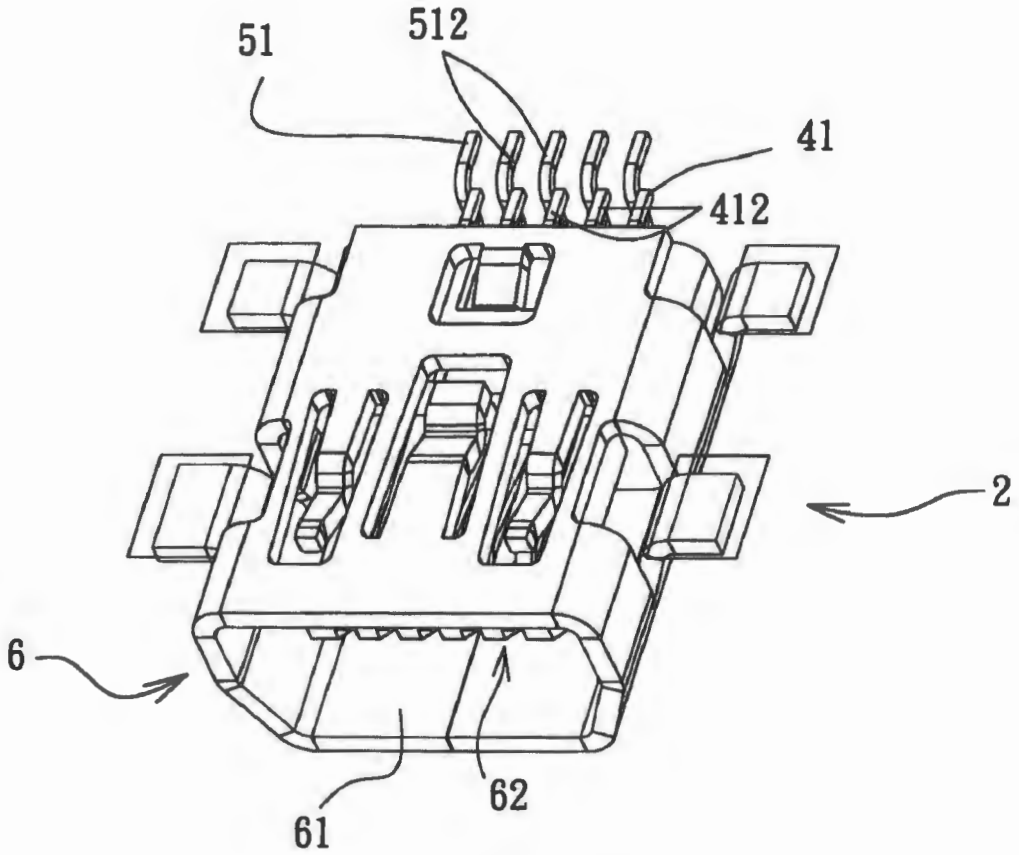
FIG. 1



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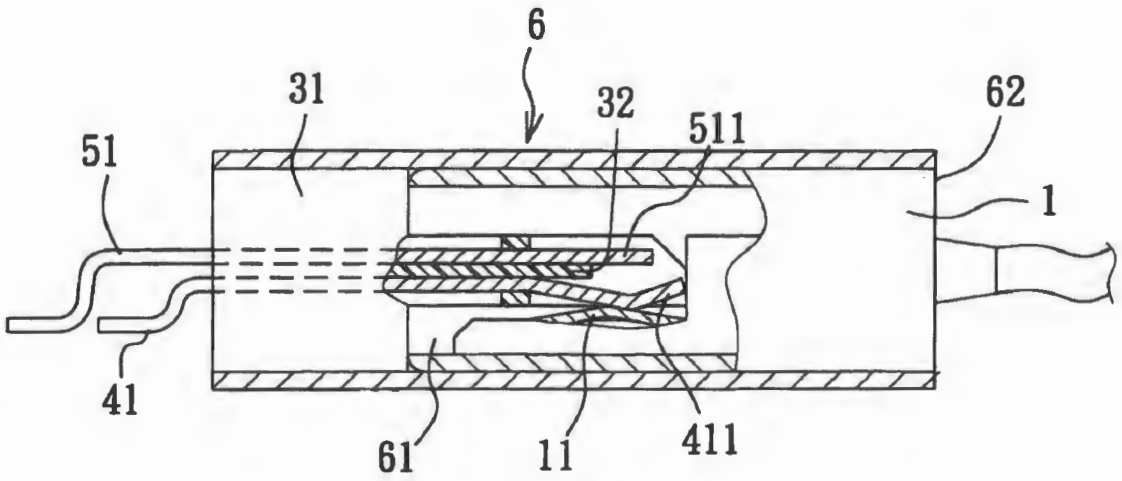

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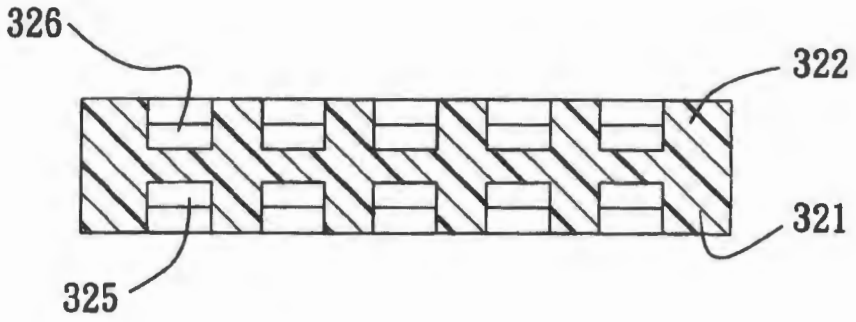

FIG. 4

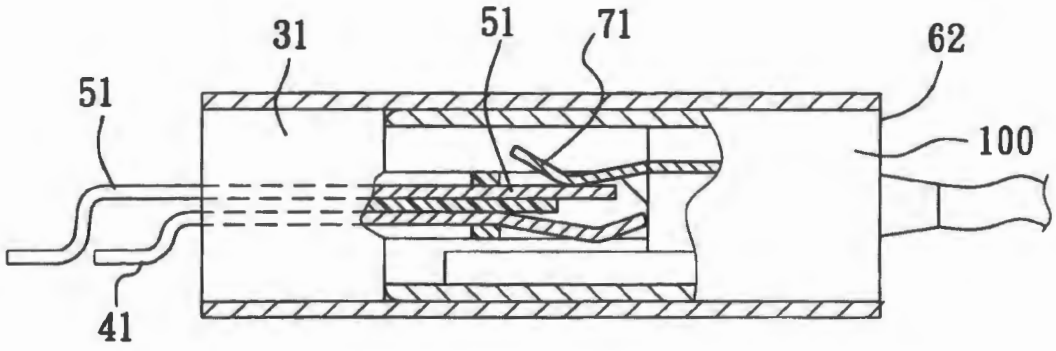

FIG. 5

ELECTRICAL SOCKET ASSEMBLY AND PLUG CONNECTOR COUPLED THERETO

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to an electrical socket assembly, and more particularly to an electrical socket assembly that conforms to universal serial bus (USB) specifications, and that has the ability to transmit both USB- and non-USB-compliant signals. The present invention relates also to a plug connector that is electrically coupled to the electrical socket assembly for transmitting the non-USB-compliant signals.

2. Description of the Related Art

It is becoming the standard for digital devices that interface with a PC (personal computer) to be USB-based. Examples of such digital devices include MPEG (Moving Pictures Experts Group) Audio Layer-3 players, which are commonly referred to simply as MP3 players, digital cameras, and digital camcorders.

In the case of the MP3 player, this digital device typically includes the player itself with all the required circuitry and buttons for user manipulation, an audio port, and a data port. An MP3 player is used in conjunction with a pair of earphones or headphones, and a cable for connection to a PC. An earphone connector of the earphones is connected to the audio port of the MP3 player. The cable, assuming that the MP3 player is USB-based, has a USB "A" connector on one end for connection to a USB socket of a PC, and a mini USB "B" connector on its other end for connection to the data port of the MP3 player. There are many different types of mini USB "B" connectors, but the USB "A" connector is standardized to enable coupling to the USB socket of any PC or USB hub.

In order to listen to music, the user connects the earphones to the audio port, and operates the MP3 player. When desiring to transfer MP3 files from the PC to the MP3 player, the user connects the mini USB "B" connector of the cable to the data port of the MP3 player, and the USB "A" connector of the cable to the USB socket of the PC. Hence, two different ports are required for one MP3 player. This runs counter to efforts at making the MP3 player more lightweight and compact, and increases overall manufacturing costs. Another drawback of the conventional configuration is that the connection life between the earphone connector of the earphones and the audio port of the MP3 player is limited, i.e., approximately 10,000 connections. That is, wear in at least one of the elements becomes too severe following 10,000 connections and disconnections. This is in contrast to USB connectors and sockets, which have a connection life of approximately three times that of other connectors and sockets, such as the earphone connector and audio port.

SUMMARY OF THE INVENTION

The object of this invention is to provide an electrical socket assembly that conforms to USB specifications, and that has the ability to transmit both USB- and non-USB-compliant signals. Another object of this invention is to provide a plug connector that is electrically coupled to the electrical socket assembly for transmission of the non-USB-compliant signals.

The electrical socket assembly includes: an insulating body having a seat, a connection plate which projects outwardly from the seat and which has opposite first and second sides, first terminal grooves formed in the first side of the connection plate, and second terminal grooves formed in the second side of the connection plate; a shield housing surrounding said seat and said connection plate; a plurality of first terminals respectively positioned in the first terminal grooves for transmitting non-USB-compliant signals; and a plurality of second terminals respectively positioned in the second terminal grooves for transmitting and receiving USB-compliant signals.

A plug connector is matable with the electrical socket assembly. The plug connector has a plurality of third terminals for contacting the first terminals, respectively. The electrical socket assembly can mate with a standard USB plug connector having fourth terminals for contacting the second terminals, respectively. The plug connector has no terminals to contact the second terminals when mating with the electrical socket assembly.

BRIEF DESCRIPTION OF THE DRAWINGS

Other features and advantages of the present invention will become apparent in the following detailed description of the preferred embodiment with reference to the accompanying drawings, of which:

FIG. **1** is an exploded perspective view of an electrical socket assembly and a plug connector according to a preferred embodiment of the present invention;

FIG. **2** is a perspective view of the electrical socket assembly of FIG. **1**, illustrating the electrical socket assembly in an assembled state;

FIG. **3** is a sectional view of the electrical socket assembly and the plug connector of FIG. **1**, illustrating the electrical socket assembly and the plug connector in an assembled and interconnected state;

FIG. **4** is a sectional view of a connection plate of the electrical socket assembly taken along line IV—IV of FIG. **1**; and

FIG. **5** is a sectional view of the electrical socket assembly of FIG. **1**, illustrating the electrical socket assembly in a state interconnected with a standard mini USB "B" connector.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIGS. **1** and **2**, an electrical socket assembly **2** according to a preferred embodiment of the present invention is employed in an electronic device (not shown), such as an MP3 player. The electrical socket assembly **2** is electrically coupled to a circuit board of the electronic device, and allows for the transfer of both USB- and non-USB-compliant signals. For example, the electrical socket assembly **2** allows for the transfer of both data and audio signals. The electrical socket assembly **2** conforms to USB specifications to thereby allow for the connection of a USB cable (not shown) thereto. As an example, a 5-pin mini USB "B" connector of the cable is connected to the electrical socket assembly **2**, and a USB "A" connector of the cable is connected to a USB socket of a data transfer device (not shown), such as a PC, thereby allowing for data transfer to the electronic device from the data transfer device. The electrical socket assembly **2** may be configured to allow for the reception of various types of mini USB "B" connectors thereto, and may even be configured to enable connection with a standard USB "B" connector.

A plug connector **1** according to a preferred embodiment of the present invention may also be connected to the electrical socket assembly **2**. This interconnection between

2. The electrical socket assembly of claim 1, wherein each of said first terminals has a contact end exposed on said first side, and a coupling end projecting out of said seat.

3. The electrical socket assembly of claim 2, wherein each of said second terminals has a contact end exposed on said second side, and a coupling end projecting out of said seat.

4. The electrical socket assembly of claim 1, wherein the non-USB-compliant signals include audio signals.

5. An electrical connector assembly, comprising:

an electrical socket and a plug connector matable with said electrical socket;

said electrical socket including:

an insulating seat, a connection plate which projects outwardly from said seat and which has opposite first and second sides, first terminal grooves formed in said first side of said connection plate, and second terminal grooves formed in said second side of said connection plate;

a plurality of first terminals respectively positioned in said first terminal grooves for transmitting audio signals; and

a plurality of second terminals respectively positioned in said second terminal grooves for transmitting and receiving data signals;

a shield housing surrounding said insulating seat and said connection plate;

said plug connector having a plurality of third terminals for contacting said first terminals, respectively;

wherein the first terminals are non-USB terminals, and wherein the second terminals are USB terminals.

6. The electrical connector assembly of claim 5, wherein said electrical socket is further adapted for mating with a standard USB plug connector having fourth terminals for contacting said second terminals, respectively.

7. The electrical connector assembly of claim 6, wherein said plug connector has no terminals to contact said second terminals when mating with said electrical socket.

* * * * *