[00128] The first housing section 1110 and the second housing section 1120 may be any suitable electrical cord lockout box including the Panduit PSL-CL110.

[00129] Figure 12 illustrates a perspective view of an electrical power system 130 of Figure 1. The electrical power system the electrical power system housing 1010 of Figure 10, a bore 1220, and the display device 1072 of Figure 10. In the electrical power system 130 of Figure 1, the bore 1220 is positioned on the electrical power housing 1010 of Figure 10. The display device 1072 of Figure 10 is mechanically coupled to the housing.

[00130] In operation, the bore 1220 preferably allows an electrical cord attached the electric plug 145 enclosed by the electrical power system housing 1010 of Figure 10 to mechanically run through the electrical power system 130 of Figure 1 to remain electrically connected to the consumer electronic device 140 of Figure 1.

[00131] Figure 13 illustrates a plan view of the display device 1072 of Figure 10 of the electrical power management system 130 of Figure 1 in input mode. The display device 1072 of Figure 10 includes display panel 1310 and a first user input button 1321, a second user input button 1322, a third user input button 1323, a fourth user input button 1324, and a fifth user input button 1325.

[00132] In the display device 1072 of Figure 10, the display panel 1310 is electrically coupled to the first user input button 1321, the second user input button 1322, the third user input button 1323, the fourth user input button 1324, and the fifth user input button 1325. The display device 1072 of Figure 10 is in electronic communication with the control system 120 of Figure 1.

[00133] In operation, when the display device 1072 of Figure 10 is in input mode, a user inputs an identifying code in a series of steps. First, the display panel 1310, which is preferably an LCD display, shows a "ENTER CODE" message. In response to reading the "ENTER CODE" message, the user inputs an indentifying code by pressing a five digit combination of the first user input button 1321, the second user input button 1322, the third user input button 1323, the fourth user input button 1324, or the fifth user input button 1325. The first user input button 1321, the second user input button 1322, the third user input button 1323, the fourth user input button 1324, and the fifth user input button 1325 are preferably electronic push button switches. After the user inputs the identifying code, the display device 1072 of Figure 10 generates data representing the identifying code and transmits the data representing the identifying code to the control system 120 of Figure 1.

[00134] The panel display 1310 may also be any suitable display device including a LED, a plasma display, an electroluminescent display, or a vacuum fluorescent display tube.

[00135] The first user input button 1321, the second user input button 1322, the third user input button 1323, the fourth user input button 1324, or the fifth user input button 1325 may also be any suitable user input devices such as a touch screen displays and mechanical rotating dials.

[00136] In an alternative embodiment, display does not necessarily include the first user input button 1321, the second user input button 1322, the third user input button 1323, the fourth user input button 1324, or the fifth user input button 1325. Instead, the display device 1072 of Figure 10 includes a speaker with voice recognition. The voice

recognition is preferably implemented with a suitable combination of digital logic. In this embodiment, when a user speaks a pre-determined verbal identifying code into the speaker, the display device 1072 of Figure 10 generates data representing the verbal identifying code and transmits the signal representing the identifying code to the control system 120 of Figure 1.

[00137] In yet another embodiment, the display does not necessarily include the first user input button 1321, the second user input button 1322, the third user input button 1323, the fourth user input button 1324, or the fifth user input button 1325. Instead, the display device 1072 of Figure 10 includes a biometric detection device with biometric data recognition. The biometric data recognition is preferably implemented with suitable a suitable combination of digital logic. The biometric detection device may also be any suitable biometric system including a retinal scanner, a finger print scanner, and a facial recognition scanner.

[00138] Figure 14 illustrates a plan view of the display device 1072 of Figure 10 of the electrical power management system 130 of Figure 1 in power mode. The display device 1072 of Figure 10 includes a user display panel 1410, a time display panel 1415, and the first user input button 1321 of Figure 13, the second user input button 1322, the third user input button 1323 of Figure 13, the fourth user input button 1324 of Figure 13, and the fifth user input button 1325 of Figure 13.

[00139] In the display device 1072 of Figure 10, the user display panel 1410 and the time display 1415 is electrically coupled to the first user input button 1321, the second user input button 1322, the third user input button 1323, the fourth user input

button 1324, and the fifth user input button 1325. The display device 1072 of Figure 10 is in electronic communication with the control system 120 of Figure 1.

[00140] In operation, when the display device 1072 of Figure 10 is in power mode, the display device 1072 of Figure 10 provides a user with power information in a series of steps. First, the control system 120 of Figure 1 transmits data representing electrical power time to the display device 1072 of Figure 10. In response to receiving the signal representing electrical power time from the control system 120 of Figure 1, the user display panel 1410, which is preferably an LCD display, shows a user message. The user message is at least one predetermined alphanumeric character representing a user. Also, in response to receiving the signal representing electrical power time from the control system 120 of Figure 1, the time display panel 1415, which is preferably an LCD display, shows a time message.

[00141] In operation, the time message is at least one predetermined numeral representing electrical power time. The time message is preferably "83.5" which corresponds to eighty-three and one half minutes of remaining electrical power time. The time display panel 1415 preferably includes a counter which is preferably implemented by a suitable combination of digital logic. The counter preferably counts down the electrical power time in one half minute increments. Accordingly, the time display panel 1415 preferably updates the time message every one half minute based on the remaining electrical power time as determined by the counter. After the electrical power time is expired as determined by the counter, the display device 1072 of Figure 10 in power mode is no longer active. In response to the electrical power time expiring as determined by the counter, the display device 1072 of Figure 10 in input mode becomes active.

[00142] In alternative embodiment, when the display device 1072 of Figure 10 is in power mode, the display device 1072 of Figure 10 provides a user with power information in a series of steps. First, the control system 120 of Figure 1 transmits data representing electrical power in Watts. In response to receiving the data representing electrical power in Watts from the control system 120, the user display panel 1410, which is preferably an LCD display, shows a user message. The user message is at least one predetermined alphanumeric character representing a user. Also, in response to receiving the signal representing electrical power in Watts from the control system 120 of Figure 1, the time display panel 1415, which is preferably an LCD display, shows a time message.

[00143] In operation, the time message is at least one predetermined numeral representing remaining electrical power time based on the remaining electrical power in Watts and the power consumption of the consumer electronic device 140 of Figure 1. The time display panel 1415 preferably converts electrical power in watts to electrical power time based on the power consumption of the consumer electronic device on a suitable combination of digital logic. The time message is preferably "83.5" which corresponds to eighty-three and one half minutes of electrical power time remaining. The time display panel 1415 preferably includes a counter which is preferably implemented by a suitable combination of digital logic. The counter preferably counts down the electrical power time in one half minute increments. Accordingly, the time display panel 1415 preferably updates the time message at least every one half minute based on the remaining electrical power time as determined by the counter. After the electrical power time is expired as determined by the counter, the display device 1072 of Figure 10 in power mode is no longer active. In response to the electrical power time expiring as

determined by the counter, the display device 1072 of Figure 10 in input mode becomes active.

[00144] Figure 15 illustrates a plan view of the display device 1072 of Figure 10 of the electrical power management system 130 of Figure 1 in lock out mode. The display device 1072 of Figure 10 includes display panel 1310 of Figure 13 and the first user input button 1321 of Figure 13, the second user input button 1322 of Figure 13, the third user input button 1323 of Figure 13, the fourth user input button 1324 of Figure 13, and the fifth user input button 1325 of Figure 13.

[00145] In the display device 1072 of Figure 10, the display panel 1310 of Figure 13 is electrically coupled to the first user input button 1321 of Figure 13, the second user input button 1322 of Figure 13, the third user input button 1323 of Figure 13, the fourth user input button 1324 of Figure 13, and the fifth user input button 1325 of Figure 13. The display device 1072 of Figure 10 is in electronic communication with the control system 120 of Figure 1.

[00146] In operation, when the display device 1072 of Figure 10 is in lockout mode, the display device 1072 of Figure 10 alerts a user the electrical power system 130 is executing a lockout in a series of steps. First, the display device 1072 of Figure 10 transmits data representing a lockout notice to the control system 120 of Figure 1. After the display device 1072 of Figure 10 transmits the data representing a lockout notice to the control system 120, the display panel 1310 of Figure 13 displays a predetermined string of alphanumeric characters for a predetermined length of time. The string of alphanumeric characters on the display 1510 is preferably "LOCKOUT." The predetermined length of time is preferably thirty seconds. After the display device 1072

of Figure 10 transmits the signal representing a lockout notice to the control system 120 of Figure 1, the first user input button 1321 of Figure 13, the second user input button 1322 of Figure 13, the third user input button 1323 of Figure 13, the fourth user input button 1324 of Figure 13, and the fifth user input button 1325 of Figure 13 are all disabled. The first user input button 1321 of Figure 13, the second user input button 1322 of Figure 13, the third user input button 1323 of Figure 13, the fourth user input button 1324 of Figure 13, and the fifth user input button 1325 of Figure 13 are preferably disabled when display device 1072 of Figure 10 does not generate data representing the identifying code and transmit the data representing the identifying code to the control system 120 of Figure 1 in response to a user inputting the identifying code into a five digit combination of the first user input button 1321 of Figure 13, the second user input button 1322 of Figure 13, the third user input button 1323 of Figure 13, the fourth user input button 1324 of Figure 13, and the fifth user input button 1325 of Figure 13.

[00147] Figure 16 illustrates a plan view the display device 1072 of Figure 10 of the electrical power management system 130 of Figure 1 in restore mode. The display device 1072 of Figure 10 includes display panel 1310 of Figure 13 and the first user input button 1321 of Figure 13, the second user input button 1322 of Figure 13, the third user input button 1323 of Figure 13, the fourth user input button 1324 of Figure 13, and the fifth user input button 1325 of Figure 13.

[00148] In the display device 1072 of Figure 10, the display panel 1310 of Figure 13 is electrically coupled to the first user input button 1321 of Figure 13, the second user input button 1322 of Figure 13, the third user input button 1323 of Figure 13, the fourth user input button 1324 of Figure 13, and the fifth user input button 1325 of Figure 13.

The display device 1072 of Figure 10 is in electronic communication with the control system 120 of Figure 1.

[00149] In operation, when the display device 1072 of Figure 10 is in restore mode, the display device 1072 of Figure 10 alerts a user the electrical power system 130 of Figure 1 is executing a restore in a series of steps. First, the display device 1072 of Figure 10 receives data representing a restore command from the control system 120 of Figure 1. The display panel 1310 of Figure 13 responds to receiving the restore command by displaying a string of alphanumeric characters on the display panel 1310 of Figure 13 for a predetermined time period. The string of alphanumeric characters on the display 1072 is preferably "RESTORE." The predetermined time period is preferably sixty seconds. After the predetermined time period is expired, the display device 1072 of Figure 10 in restore mode is no longer active. In response to the predetermined time period expiring, the display device 1072 of Figure 10 in input mode becomes active. The display device 1072 of Figure 10 preferably determines when the predetermined time period is expired by counting down the remaining display time. The counting is preferably performed by a suitable combination of digital logic.

[00150] Figure 17 illustrates an elevational view of the electrical power system 130 of Figure 1. The cross section of the electrical power system 130 of Figure 1 defined by the line from A to A' shows the first electrical outlet 1125 of Figure 11. When the prongs of electric plug 145 of Figure 1 are inserted into the first electrical outlet 1125 of Figure 11, the electric plug 145 of Figure 1 is electrically connected to the first electrical outlet 1125 of Figure 11.

[00151] Figure 18 illustrates a block diagram of an alternative embodiment electrical power system 1830. Like the electrical power system 130 of Figure 1, the electrical power system 1830 includes the electrical power system housing 1010 of Figure 10, the electrical power system central processing unit 1020 of Figure 10, the power toggle 1030 of Figure 10, the lock monitor 1040 of Figure 10, the electrical outlet monitor 1050 of Figure 10, the communication link 1060 of Figure 10, the user interface 1070 of Figure 10, the emergency power supply 1080 of Figure 10. Like the electrical power system 130 of Figure 1, the user interface 1070 of Figure 1 includes a display device 1072 of Figure 10 and an input button 1074 of Figure 10. Unlike the electrical power system 130 of Figure 1, the electrical power system 1830 additionally includes an electrical power time storage 1832 and an electrical power system identifying code database 1834.

[00152] In the electrical power system 1830, all of the connections described above for the electrical power system 130 of Figure 1 exist. Additionally, electrical power time storage 1832 and the electrical power system identifying code database are electrically coupled to the electrical power system central processing unit 1020 of Figure 10.

[00153] In operation, the electrical power system 1830 functions similarly to the electrical power system 130 of Figure 1 as described above except the electrical power system storage 1840 adds additional functionality. Unlike the electrical power system 130 of Figure 1, in operation when a first user turns off the consumer electronic device 140 of Figure 1 before the electrical power time expires, the communication link 1060 of Figure 10 of the electrical power system 1830 does not necessarily transmit data

representing remaining electrical power time to the control system 120 of Figure 1. Instead, the electrical power time storage 1832 stores data representing remaining electrical power time. Then when a user inputs an identifying code into the input button 1074 of Figure 10, electrical power system central processing unit 1020 of Figure 10 retrieves data representing remaining electrical power time corresponding to the identifying code from the electrical power time storage 1832. Next, the electrical power system central processing unit 1020 of Figure 10 passes the data representing remaining electrical power time to the power toggle 1030 of Figure 10.

[00154] One of ordinary skill in the art will appreciate the electrical power time storage 1832 and the electrical power system identifying code database 1834 of electrical power system 1830 preferably enables the electrical power system to perform some of the functions performed by the control system 120 of Figure 1. For example, in an alternative embodiment, the electrical power system 1830 performs the control system 120 of Figure 1 function of granting a first user electrical power access (as shown below in Figure 19).

[00155] Figure 19 illustrates a flow chart of a method for granting a first user electrical power access 1900. The first user is preferable a child. First, at step 1910, the second communication link 660 of Figure 6, which is preferably a Bluetooth Tx/Rx dongle, receives data representing an identifying code from the electrical power unit 130 of Figure 1.

[00156] Next, at step 1920, the second communication link 660 of Figure 6 passes the data representing an identifying code to the control system central processing unit 610 of Figure 6. After the control system central processing unit 610 of Figure 6 receives the

data representing an identifying code, the central processing unit 610 of Figure 6 compares the data representing an identifying code to the identifying codes stored in the identifying code database 620 of Figure 6.

[00157] Next, at step 1930, the control system central processing unit 610 of Figure 6 determines whether the data representing an identifying code equals one identifying code in the identifying code database 620 of Figure 6. When the data representing an identifying code equals one identifying code in the identifying code database 620 of Figure 6, the method for granting a first user electrical power access 1900 proceeds to step 1940. When the data representing an identifying code does not equal one identifying code in the identifying code database 620 of Figure 6, the method for granting a first user electrical power access proceeds to step 1935.

[00158] Next, at step 1935, the second communication link 660 of Figure 6 transmits data representing "No Access" to the electrical power management system 130 of Figure 1. In response to receiving the data representing "No Access," the display device 1072 of Figure 10 displays a string of alphanumeric characters which represent the phrase "No Access."

[00159] Next, at step 1940, the control system central processing unit 610 of Figure 6 responsively retrieves a user profile from the control system storage component 680 of Figure 6 corresponding to the one identifying code in the identifying code database 620 of Figure 6. The control system storage component 680 is preferably EEPROM.

[00160] Next, at step 1950, the control system central processing unit 610 of Figure 6 scans the user profile for data representing electrical power time.

[00161] Next, at step 1960, the control system central processing unit 610 of Figure 6 determines whether data representing electrical power time exists in the user profile corresponding to the one identifying code in the identifying code database 620 of Figure 6. When the control system central processing unit 610 of Figure 6 determines data representing electrical power time exists in the user profile corresponding to the one identifying code in the identifying code database 620, the method for granting a first user electrical power access proceeds to step 1970. When the control system central processing unit 610 of Figure 6 determines data representing electrical power time does not exist in the user profile corresponding to the one identifying code in the identifying code database 620 of Figure 6, the method for granting a first user electrical power access proceeds to step 1935 (described above).

[00162] Next, at step 1970, the control system central processing unit 610 of Figure 6 passes the data representing the electrical power time from the user profile corresponding to the one identifying code in the identifying code database 620 of Figure 6 to the second communication link 660 of Figure 6. Finally, the second communication link 660 of Figure 6 transmits the data representing the electrical power time to the electrical power system 130 of Figure 1. In response to receiving the data representing electrical power time, the electrical power system 130 of Figure 1 provides electrical power from the electrical power supply 135 of Figure 1 to the electric plug 145 of Figure 1.

[00163] Figure 20 illustrates a flow chart for a method of granting a second user control system 120 of Figure 1 access 2000. The second user is preferably a parent of the first user. First, at step 2010, the second user inputs a password into the second user input

device 690 of Figure 6. The second user preferably inputs a predetermined password which is determined by the second user the first time the control system 120 of Figure 1 is activated. The predetermined password is preferably a string of five alphanumeric characters stored on the server 150 of Figure 1. The second user input device 690 of Figure 6 is preferably a computer keyboard. After the second user inputs a password into the second user input device 690 of Figure 6, the second user input device 690 of Figure 6 passes data representing the password to the control system central processing unit 610 of Figure 6.

[00164] Next, at step 2020, the control system central processing unit 610 of Figure 6 compares the data representing a password to the predetermined password.

[00165] Next, at step 2030, the control system central processing unit 610 of Figure 6 determines whether the data representing a password is equal to the predetermined password. When the data representing a password is equal to the predetermined password, method of granting a second user control system 120 of Figure 1 access 2000 proceeds to step 2040. When the data representing a password is not equal to the predetermined password, the method of granting a second user control system 120 of Figure 1 access 2000 proceeds to step 2050.

[00166] Next, at step 2040, control system central processing unit 610 of Figure 6 responsively provides the second user control system 120 of Figure 1 access. The second user's access to the control system 110 of Figure 1 allows the second user to interact with the entry screen (as shown in Figure 7), to interact with the profile screen (as shown in Figure 8), and to interact with the local setup screen (as shown in Figure 9).

[00167] Next, at step 2050, the second user establishes his or her identity to retrieve the predetermined password stored on the server 150 of Figure 1. The second user preferably establishes their identity by inputting his or her driver's license number into the second user input device 690 of Figure 6.

[00168] Next, at step 2060, the control system central processing unit 610 of Figure 6 passes the data representing the second user's identity to the third communication link 670 of Figure 6. The third communication link 670 of Figure 6 is preferably an Ethernet port connected to the Internet. The third communication link 670 of Figure 6 transmits the data representing the second user's identity to the server 150 of Figure 1.

[00169] Next, at step 2070, the server 150 of Figure 1 responds to receiving the data representing the second user's identity by locating the predetermined password corresponding to the second user's identity.

[00170] Next, at step 2080, when the server 150 of Figure 1 locates the predetermined password corresponding to the second user's identity, the server 150 of Figure 1 transmits data representing the predetermined password to the third communication link 670 of Figure 6.

[00171] After the server 150 of Figure 1 transmits data representing the predetermined password to the third communication link 670 of Figure 6, the method of granting a second user control system 120 of Figure 1 access 2000 proceeds to step 2020. In response to receiving the data representing the predetermined password, the third communication link 670 of Figure 6 passes the data representing the second user's identity to the control system central processing unit 610. Then the control system

central processing unit 610 compares the data representing the predetermined password to the predetermined password.

[00172] Next, at step 2030, the control system central processing 610 of Figure 6 determines whether data representing the predetermined password is equal to the predetermined password. Because the data representing the predetermined password equals the predetermined password, the method of granting a second user control system 120 of Figure 1 access 2000 proceeds to step 2040.

[00173] Next, at step 2040, the control system central processing unit 610 of Figure 6 provides the second user control system 120 of Figure 1 access.

[00174] Figure 21 illustrates a method of uploading data representing user movement 2100. First, a first user connects the sensor 110 of Figure 1 to the first communication link 650 of Figure 6. The first communication link 650 of Figure 6 is preferably a USB connection.

[00175] Next, at step 2120, the control system central processing unit 610 of Figure 6 responsively locates the data representing user movement from the sensor 110 of Figure 1.

[00176] Next, at step 2130, the control system central processing unit 610 of Figure 6 determines whether there is data representing user movement to retrieve from the sensor 110 of Figure 1. When the control system central processing unit 610 of Figure 6 determines there is data representing user movement to retrieve from the sensor 110 of Figure 1, the method of uploading data representing user movement 2100 proceeds to step 2140. When the control system central processing unit 610 of Figure 6

determines there is not data representing user movement to retrieve from the sensor 110 of Figure 1, the method of uploading data representing user movement 2100 proceeds to step 2160. At step 2160, the control system central processing unit 610 of Figure 6 terminates the connection between the sensor 110 of Figure 1 and the first communication link 650 of Figure 6.

[00177] Next, at step 2140, the control system central processing unit 610 of Figure 6 converts the data representing user movement to data representing electrical power time by multiplying the data representing user movement by a predetermined multiplier. The predetermined multiplier is preferably determined by a second user during control system 120 of Figure 1 access.

[00178] Next, at step 2150, the control system central processing unit 610 of Figure 6 passes the data representing electrical power time to a user profile, which is preferably stored on control system storage component 680 of Figure 6, corresponding to sensor 110 of Figure 1. The user profile is credited with data representing electrical power time.

[00179] Next, at step 2160, the control system central processing unit 610 of Figure 6 terminates the connection between the sensor 110 of Figure 1 and the first communication link 650 of Figure 6.

[00180] The control system storage component 680 of Figure 6 may also be any computer-readable medium, such as physical or virtual memory, including flash memory, RAM, SRAM, DRAM, ROM, EPROM, magnetic media, optical media, a soft disk, a hard disk, and any other type of secondary or tertiary memory.

[00181] The second user input device 690 of Figure 6 may also be any suitable user input device such as electronic push button switches, a touch screen display, or a mechanical rotating dial.

[00182] In an alternative embodiment, the user does not necessarily input a password into the second user input device 690 of Figure 6 in the method of granting a second user control system 120 of Figure 1 access 2000. Instead, the second user input device 690 of Figure 6 includes a biometric detection device with biometric data recognition. The biometric data recognition is preferably implemented with suitable a suitable combination of digital logic. The biometric detection device may be any suitable biometric system including a voice recognition speaker, a retinal scanner, a finger print scanner, and a facial recognition scanner. Accordingly, in this embodiment, at step 2010, the second user inputs biometric data into the second user input device 690 of Figure 6.

[00183] The first communication link 650 of Figure 6 may also be any serial or parallel communication port, such as an Ethernet port, a 802.11 port, or a DB-25 port.

[00184] The second communication link 660 of Figure 6 may also be any device suitable for wireless communication on wireless communications network such as IrDA network, an ultra- UWB network, a ZigBee protocol network, a Wi-Fi Alliance network, or an IEEE 802.11 network.

[00185] Figure 22 illustrates an alternative method of uploading data representing user movement 2200. In this embodiment, the control system central processing unit 610 of Figure 6 does not credit a user profile corresponding to the sensor 110 of Figure with data representing electrical power time. Instead, the alternative method of uploading data

representing user movement 2200 transmits the data representing electrical power time to the electrical power system 130.

[00186] First, at step 2110 of Figure 21, a first user connects the sensor 110 of Figure 1 to the first communication link 650 of Figure 6. The first communication link 650 of Figure 6 is preferably a USB connection.

[00187] Next, at step 2120 of Figure 21, the control system central processing unit 610 of Figure 6 responsively locates the data representing user movement from the sensor 110 of Figure 1.

[00188] Next, at step 2130 of Figure 21, the control system central processing unit 610 of Figure 6 determines whether there is data representing user movement to retrieve from the sensor 110 of Figure 1. When the control system central processing unit 610 of Figure 6 determines there is data representing user movement to retrieve from the sensor 110 of Figure 1, the method of uploading data representing user movement 2100 proceeds to step 2140. When the control system central processing unit 610 of Figure 6 determines there is not data representing user movement to retrieve from the sensor 110 of Figure 1, the method of uploading data representing user movement 2100 proceeds to step 2160. At step 2160 of Figure 21, the control system central processing unit 610 of Figure 6 terminates the connection between the sensor 110 of Figure 1 and the first communication link 650 of Figure 6.

[00189] Next, at step 2140 of Figure 21, the control system central processing unit 610 of Figure 6 converts the data representing user movement to data representing electrical power time by multiplying the data representing user movement by a

predetermined multiplier. The predetermined multiplier is preferably determined by a second user during control system 120 of Figure 1 access.

[00190] Next, at step 2250, the control system central processing unit 610 passes the data representing electrical power time to the second communication link 660, which is preferably a Bluetooth Tx/Rx dongle. In response to receiving the data representing the electrical power time, the second communication link 660 transmits the data representing the electrical power time to the electrical power system 130 of Figure 1.

[00191] Next, at step 2160 of Figure 21, the control system central processing unit 610 of Figure 6 terminates the connection between the sensor 110 of Figure 1 and the first communication link 650 of Figure 6.

[00192] In an alternative embodiment, the system for increasing exercise 100 does not necessarily include a sensor 110. Instead, the control system 120 and electrical power system 130 are used limit daily electrical power time to a consumer electronic device. Accordingly, parents very concerned about their child's carbon emissions may limit the child's daily carbon emissions without requiring the child to exercise.

[00193] In another alternative embodiment, the entry screen 700 of Figure 7, the profile screen 800 of Figure 8, and the local setup screen 900 of Figure 9 each include a save command. The save command allows a second user to save information for later use.

[00194] In yet another embodiment, the entry screen 700 of Figure 7, the profile screen 800 of Figure 8, and the local setup screen 900 of Figure 9 each include an exit command. The exit command allows a second user to exit the control system 120 access.

[00195] In an alternative embodiment, the entry screen 700 of Figure 7, the profile screen 800 of Figure 8, and the local setup screen 900 of Figure 9 are not necessarily included with control system 120 of Figure 1 access. Instead, the entry screen 700 of Figure 7, the profile screen 800 of Figure 8, and the local setup screen 900 of Figure 9 are located on the server 150 of Figure 1. Accordingly a second user interacts with the entry screen 700 of Figure 7, the profile screen 800 of Figure 8, and the local setup screen 900 of Figure 9 during server 150 of Figure 1 access.

[00196] The sensor central processing unit 320 of Figure 3 may also be any suitable microprocessor. Similarly, the control system central processing unit 610 of Figure 6 may be any suitable microprocessor. Finally, the electrical power system central processing unit 1020 may be any suitable microprocessor.

[00197] In view of the forgoing teaching, embodiments of the present invention provide numerous advantages over other known systems, methods, and devices for increasing exercise. Importantly, the system for increasing exercise 100 of Figure 1 fully incentivizes children to exercise. Fully incentivizing children to exercise is the best way to reduce child obesity. The system for increasing exercise 100 of Figure 1 fully incentivizes children to exercise for three reasons.

[00198] First, the system for increasing exercise 100 of Figure 1 fully incentivizes children to exercise because the system for increasing exercise 100 of Figure 1 converts a child's data representing user movement to data representing electrical power time. The child then uses electrical power time on the consumer electronic device 140 of Figure 1. Unlike the system of Baker money transactions, which do not fully incentive children to exercise, children are fully incentivized to exercise for electrical power time for

consumer electronic devices because children really enjoy consumer electronic devices like television, videos, and DVDs. Accordingly, children grave access to consumer electronic devices. Moreover, electrical power time is a more affordable incentive to give children than the money transaction disclosed in the system of Baker because the cost of one kilowatt hour to power a consumer electronic device, which is approximately $0.10, is a more cost effective exercise incentive than paying children money equal to the cost of one kilowatt hour. In other words, for the same amount of child exercise, the parent will have to pay more money directly to child as opposed to paying the electric company for kilowatt hours of electricity because children exercise more in response to electrical power time.

[00199] Second, the system for increasing exercise 100 of Figure 1 fully incentivizes children to exercise by discreetly detecting user movement. For a variety of reasons, children preferably desire to discreetly increase their exercise. Indeed, children want to avoid being teased by other children for being unhealthy, different, or a goody two-shoes for following their parents' directions. Moreover, children want to avoid being weighed down and having awkward movement. Because children are young, children are full of energy and do not like to be weighed down or have awkward movement. Unlike the armband sensor disclosed in the system of Teller and the lower back sensor disclosed in the system of Cheng and Hailes, the sensor 110 of Figure 1 preferably fits inside a child's pocket when the sensor 110 of Figure 1 detects user movement. The child only needs to remove the sensor 110 of Figure 1 out of his or her pocket to connect the sensor 110 of Figure 1 to the control system 120 of Figure 1 to transmit data representing user movement. Accordingly, other children will not see a child using the sensor 110 of

Figure 1 to detect user movement. Thus, children do not have to worry about being teased by other children. Moreover, because sensor 110 of Figure 1 fits inside a child's pocket, unlike the armband sensor disclosed in the system of Teller and the lower back sensor disclosed in the system of Cheng and Hailes, the child will not be weighed down and have awkward movement.

[00200] Third, the system for increasing exercise 100 of Figure 1 fully incentivizes children to exercise by flexibly providing electrical power. Unlike the system of Jones, which sends the reward to the mobile communications device the user inputs data into, the system for increasing exerciser 100 of Figure 1 provides electrical power to the consumer electronic device 145 of Figure 1 and not the sensor 110 of Figure 1, which detects the child's user movement. Indeed, the control system 120 of Figure 1 preferably controls at least seven electrical power systems 130 of Figure 1. These seven electrical power system 130 of Figure 1 in turn are electrically connected to seven consumer electronic devices 140 of Figure 1. Accordingly, the child chooses which one of the seven consumer electronic devices 140 of Figure 1 receives electrical power from one of seven electrical power supplies 135 of Figure 1 powered as a result of the data representing electrical power time. By choosing which one of the seven consumer electronic devices 140 of Figure 1 receives electrical power, the child will not become bored unlike reward disclosed in the system of Jones that is sent to the mobile communications device that the user inputs data into.

[00201] Further still, the system for increasing exercise 100 of Figure 1 incentivizes children to exercise without parental supervision. Unlike the system of Baker money transactions, which requires a parent to either go with the child to the bank

to get the money transaction or give the money to the child directly, the electrical power management system 130 of Figure 1 normally provides electrical power from the electrical power supply 135 to the electric plug 145 of Figure 1 which is connected to the consumer electronic device 140 of Figure 1 without parental supervision. Its only when a child tries to cheat the system for increasing exercise 100 of Figure 1 that parental supervision is required. Indeed, parental supervision is required to restore the electrical power management system 130 of Figure 1 after a lockout.

See above

[00202] Moreover, the system for increasing exercise 100 of Figure 1 minimizes the risk of hackers. Unlike the system of Teller which disclosed a server that stores and analyzes the data representing human physiological activity and also displays the data representing human physiological information in a series of web pages, the control system 120 of Figure 1 is preferably a personal computer. Accordingly, most of the system data transmission occurs locally without an internet connection. Thus, the risk of the data being appropriated by hackers is less. Other benefits of the present invention will be recognized by one of ordinary skill in the art.

[00203] While particular elements, embodiments, and applications of the present invention have been shown and described, it is understood that the invention is not limited thereto because modifications may be made by those skilled in the art, particularly in light of the foregoing teaching. It is therefore contemplated by the appended claims to cover such modifications and incorporate those features which come within the spirit and scope of the invention.

CLAIMS

What is claimed is:

1. An electrical power system for allowing electrical power to flow from an electrical power supply to an electric plug, said electrical power system including:

a communication link providing bidirectional communication with a control system;

an electrical power system central processing unit in bidirectional communication with said communication link;

a power toggle in bidirectional communication with said electrical power system central processing unit, wherein said power toggle is electrically connected to an electrical power supply, wherein said power toggle is electrically connected to an electric plug, wherein when said communication link receives data representing an amount of time electrical power is provided to an electric plug from said control system, said communication link passes said data representing an amount of time electrical power is provided to a consumer electronic device to said electrical power system central processing unit, wherein said electrical power system central processing unit passes said data representing an amount of time electrical power is provided to an electric plug to said power toggle, wherein said power toggle allows electrical power to flow from said electrical power supply to said electric plug based on said data representing an amount of time electrical power is provided to an electric plug.

2. The system of claim 1 wherein said bidirectional communication between said communication link and said control system is wireless communication.

3. The system of claim 2 wherein said wireless communication is performed on a Bluetooth network.

4. The system of claim 1 further including a user interface in bidirectional communication with said electrical power system central processing unit, wherein a user communicates with said control system through said user interface.

5. The system of claim 4 wherein said user interface includes a display device and an input button, wherein said user communicates with said control system by inputting an indentifying code into said input button.

6. The system of claim 5 wherein said control system responds to a user communication by comparing said indentifying code to an identifying code stored in an identifying code database, wherein when said identifying code equals said identifying code stored in an identifying code database, said control system transmits data representing electrical power time to said communication link.

7. The system of claim 6 wherein when no data representing electrical power time corresponds to said identifying code, said control system does not transmit data representing electrical power time to said communication link.

8. The system of claim 6 wherein when said electrical power time corresponding to said data representing electrical power time expires, said power toggle stops electrical power flow from said electrical power supply to said electric plug.

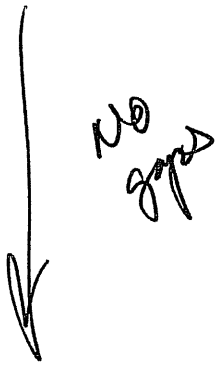
USL consistent spelling

9. The system of claim 6 wherein when a user interrupts electrical power flow to said electric plug, said power toggle stops electrical power flow from said electrical power supply to said electric plug.

10. The system of claim 9 wherein said communication link sends data representing remaining electrical power time said control system.

11. The system of claim 10 wherein when said control system receives said data representing remaining electrical power time, said control system credits said data representing remaining electrical power time to a user profile corresponding to said identifying code.

12. The system of claim 7 wherein data representing an amount of time electrical power is provided to an electric plug is in Watts.



13. An electrical power system for locking an electric plug, said electrical power system including:

a communication link providing bidirectional communication with a control system;

a housing which mechanically encloses an electric plug;

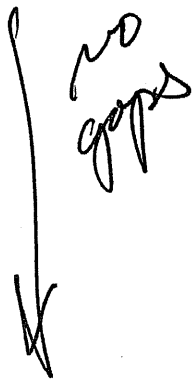
an electrical outlet mechanically coupled to said housing; and

a lock monitor electrically coupled to said communication link, wherein when said electric plug is electrically connected to said electrical outlet, a user encloses said housing around said electric plug, wherein when said user encloses said housing around said electric plug, said communication link transmits data representing a register request to said control system, wherein when said communication link transmits data representing a register request to said control system, said housing is locked.

14. The system of claim 13 wherein when said communication link receives data representing an unlock command from said control system, said lock monitor unlocks said housing.

15. The system of claim 13 wherein when said housing is locked, a user cannot electrically disconnect said electric plug from said electrical outlet.

16. The system of claim 13 wherein when said control system receives said data representing said register request, said control system stores said data representing said register request.



17. A method for allowing electrical power to flow to an electric plug, said method including:

setting a multiplier, wherein said multiplier is used to convert data representing user movement to data representing electrical power time, wherein said setting is performed on a control system, wherein said control system includes a communication link in bidirectional communication with an electrical power system;

generating said data representing user movement, wherein said generating is performed on a sensor in response to said sensor detecting user movement, wherein said sensor includes a storage element;

converting said data representing user movement to said data representing electrical power time, wherein said converting is performed on a suitable combination of digital logic in said control system, wherein said converting is performed by multiplying said data representing user movement by said multiplier to convert said data representing user movement to said data representing electrical power time;

communicating said data representing electrical power time to said electrical power system, wherein said communicating is performed by said communication link transmitting said data representing electrical power time to said electrical power system; and

powering an electric plug electrically connected to said electrical power system, wherein said powering is performed on said electrical power system, wherein said powering is performed by allowing electrical power to flow from an electrical power supply to said electric plug based on said data representing electrical power time.

18. The method of claim 17 wherein said communication link is a Bluetooth Tx/Rx dongle.

19. The method of claim 17 wherein said sensor is a pedometer.

20. The method of claim 17 further including connecting said sensor to said control system, wherein said connecting is performed on a communication link attached to said sensor.

21. The method of claim 17 further including retrieving said data representing user movement, wherein when said sensor is electrically connected to said control system, said retrieving is performed on said control system.

22. A sensor for transmitting data representing user movement to a control system, said sensor including:

a sensor, wherein said sensor detects user movement;

a sensor central processing unit, wherein said sensor central processing unit generates data representing user movement in response to said sensor detecting user movement;

a storage element in bidirectional communication with said sensor central processing unit, wherein said storage element stores said data representing user movement;

a universal serial bus port in bidirectional communication with said sensor central processing unit, wherein when said universal serial bus port is electrically connected to a control system, said universal serial bus port transmits said data representing user movement to said control system.

23. The sensor of claim 22 wherein said sensor is a pedometer.

24. The sensor of claim 22 wherein said memory is flash memory.

25. The sensor of claim 22 further including a rechargeable power supply, wherein when said universal serial bus is electrically connected to said control system, said rechargeable power supply recharges.

ABSTRACT

A system and method for increasing exercise is provided which includes an electrical power system that allows electrical power to flow from an electrical power supply to an electric plug which is attached to a consumer electronic device. The electrical power system includes a communication link in bidirectional communication with a control system and a power toggle which is electrically connected to both the electrical power supply and the electric plug. In operation, when the control system receives data representing user movement from a sensor, the control system converts the data representing user movement to data representing electrical power time. Then when the control system transmits the data representing electrical power time to the communication link of the electrical power system, the power toggle of the electrical power system responsively allows electrical power to flow from the electrical power supply to the electric plug.

Figure 1

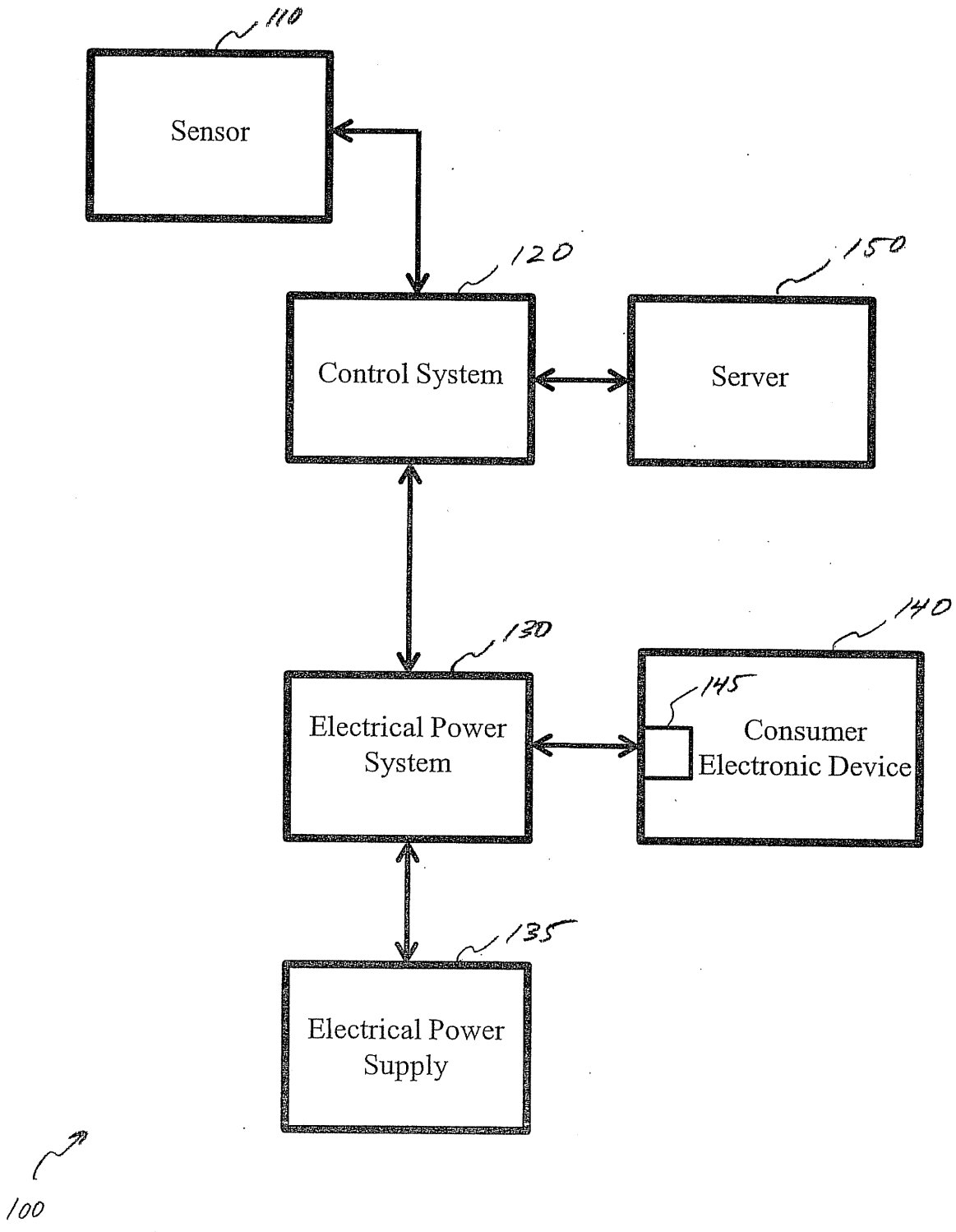

110
Sensor
120
Control System
150
Server
130
Electrical Power System
140
145
Consumer Electronic Device
135
Electrical Power Supply
100

Figure 2

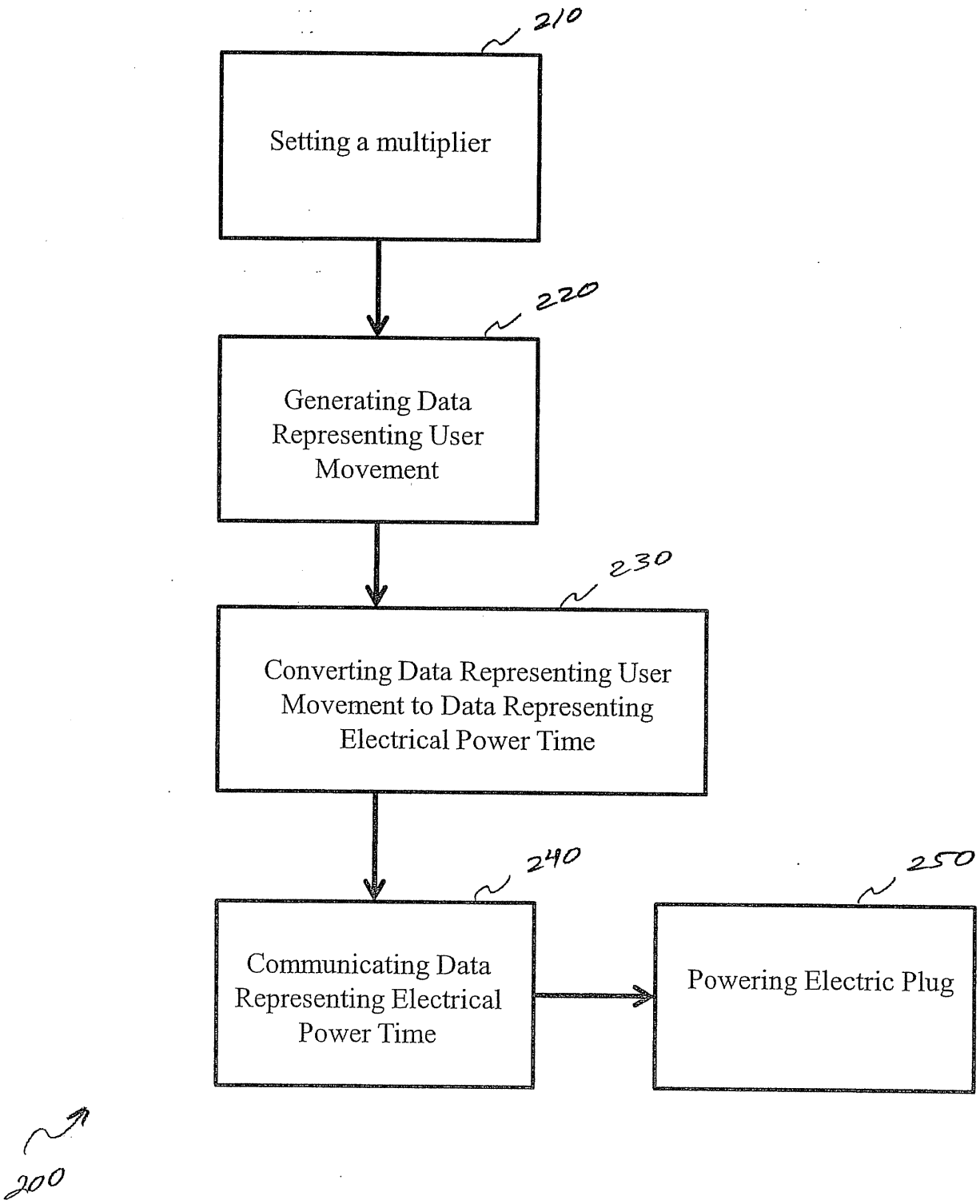

210
Setting a multiplier
220
Generating Data Representing User Movement
230
Converting Data Representing User Movement to Data Representing Electrical Power Time
240
Communicating Data Representing Electrical Power Time
250
Powering Electric Plug
200

Figure 3

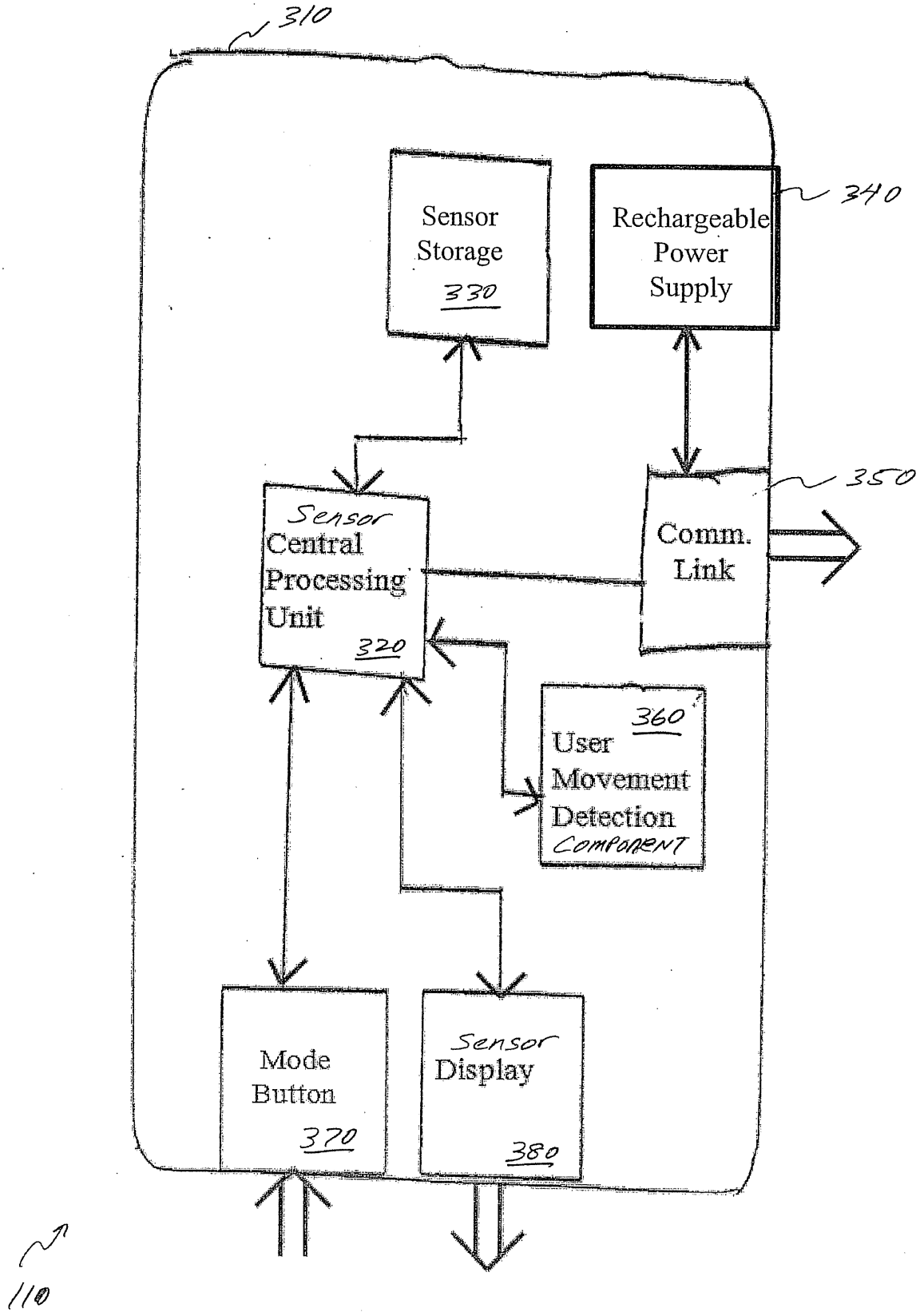

310
Sensor Storage
330
Rechargeable Power Supply
340
Sensor Central Processing Unit
320
Comm. Link
350
360
User Movement Detection Component
Mode Button
370
Sensor Display
380
110

Figure 4

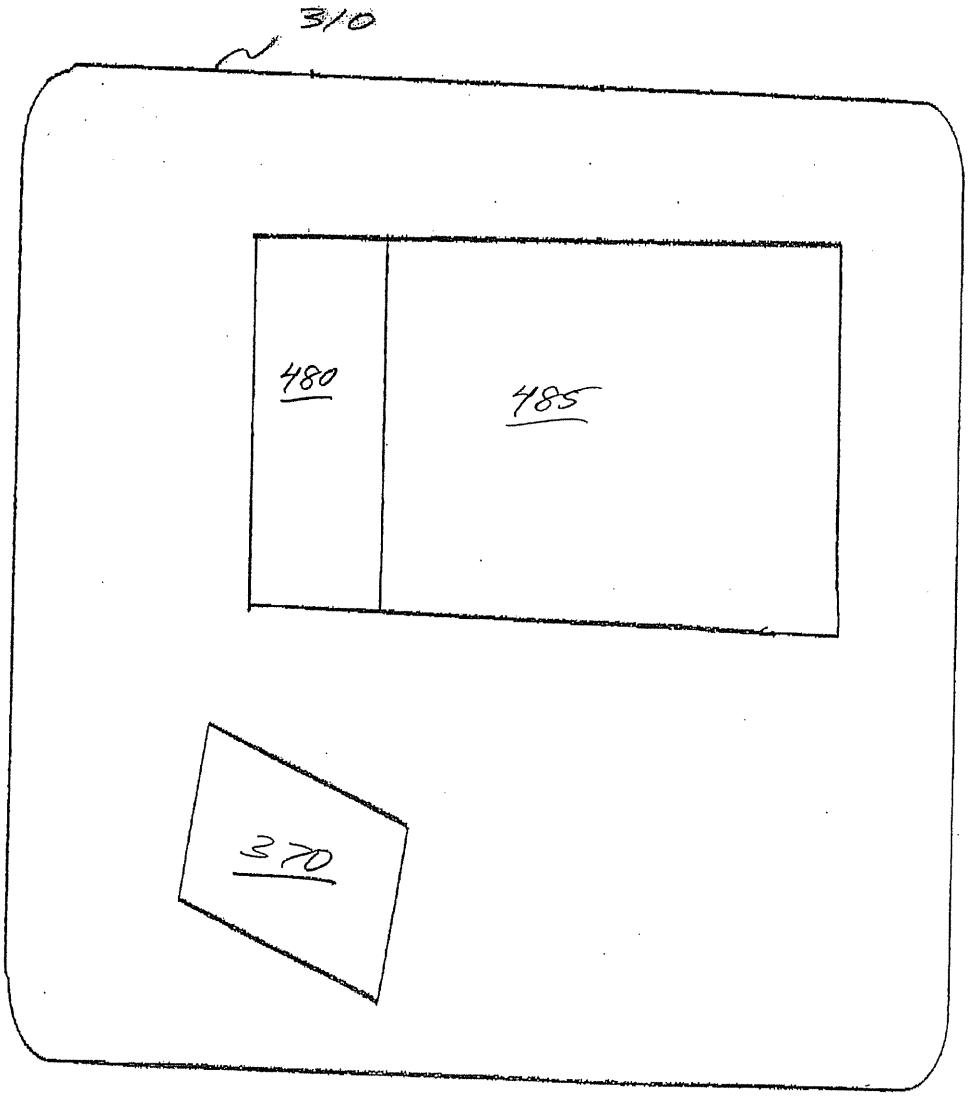


Figure 5

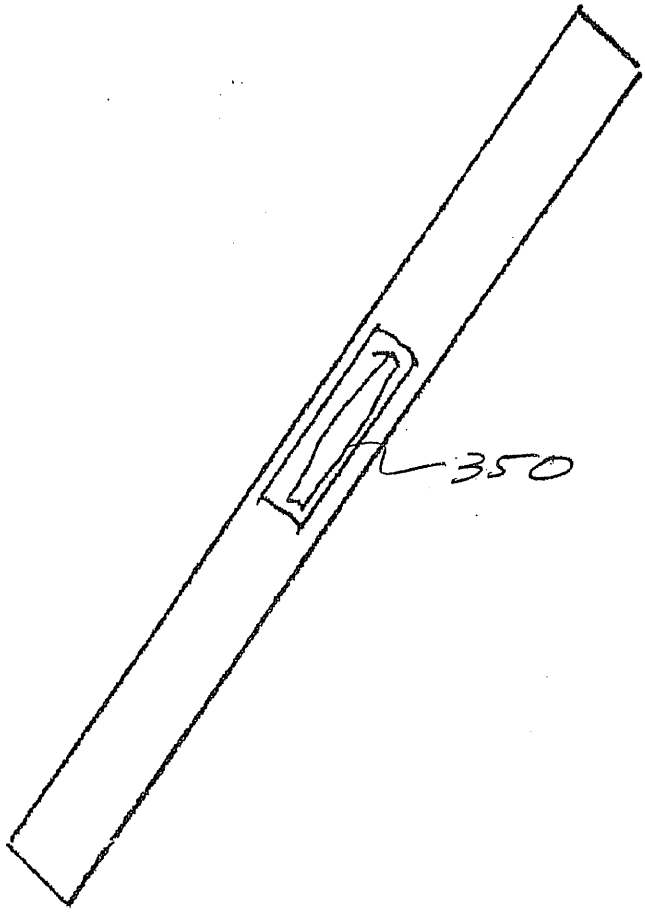


Figure 6

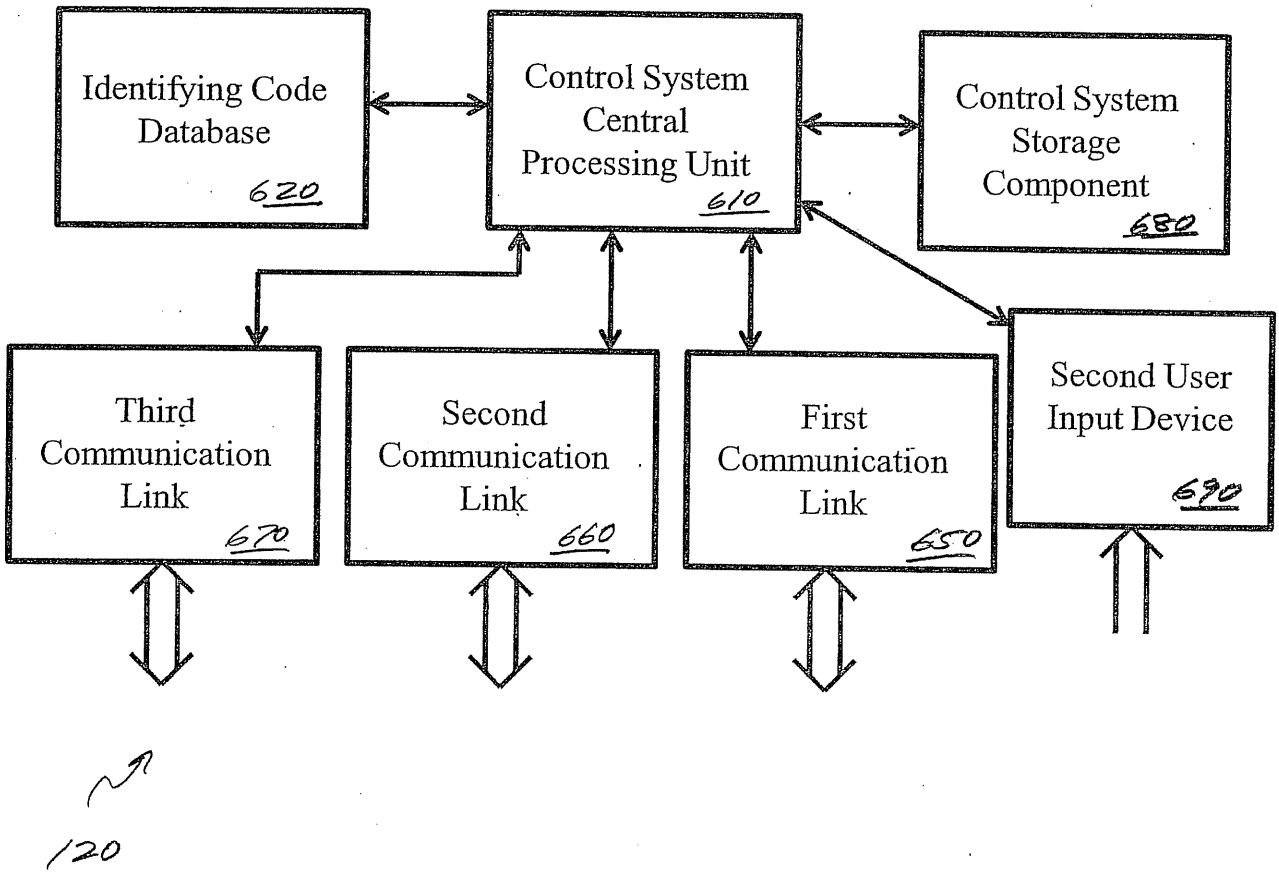

Identifying Code Database
620
Control System Central Processing Unit
610
Control System Storage Component
680
Third Communication Link
670
Second Communication Link
660
First Communication Link
650
Second User Input Device
690
120

Figure 7

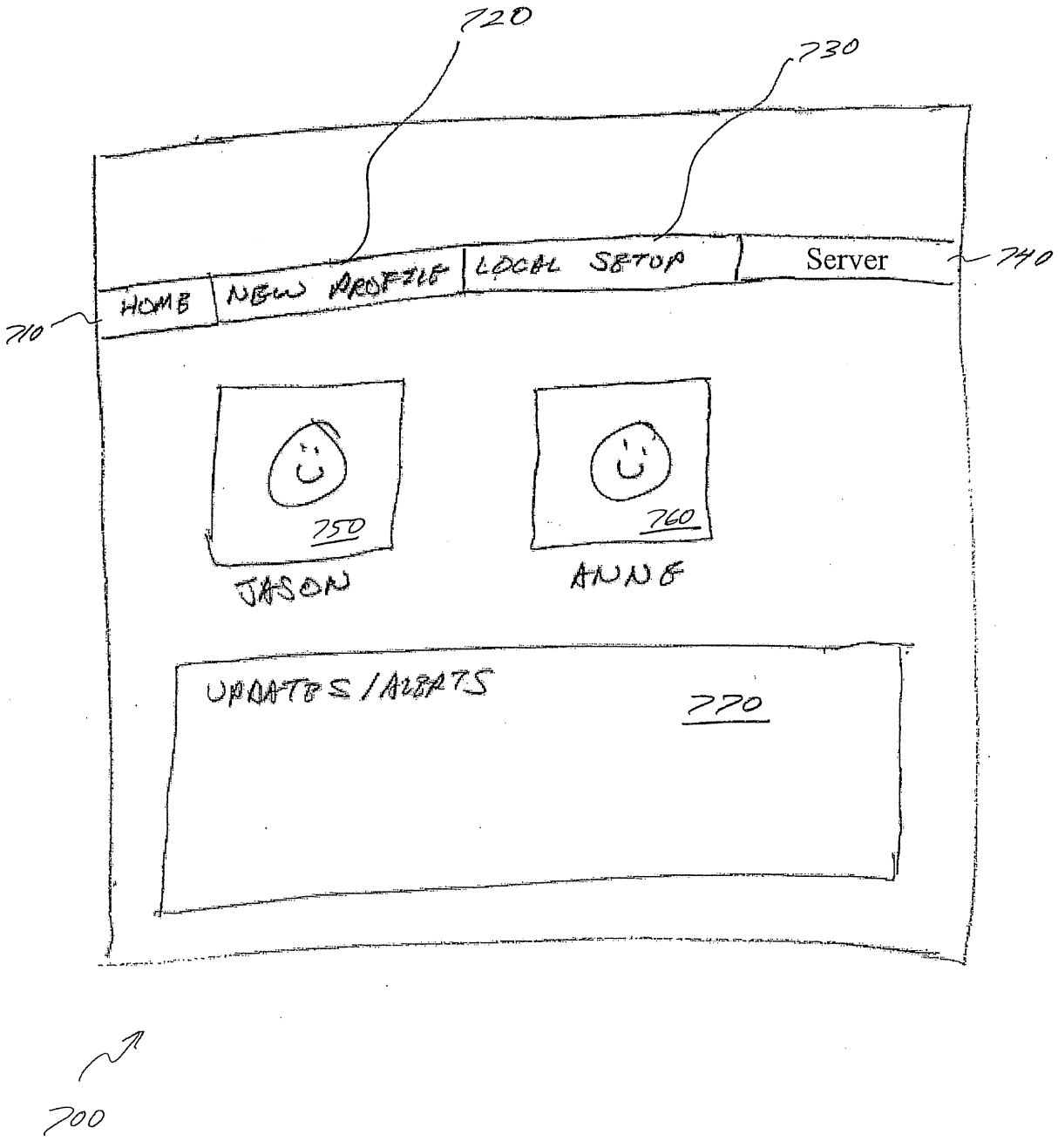

720
730
HOME
NEW PROFILE
LOCAL DESKTOP
Server
740
710
750
760
JASON
ANNE
UPDATES/ALERTS
770
700

Figure 8

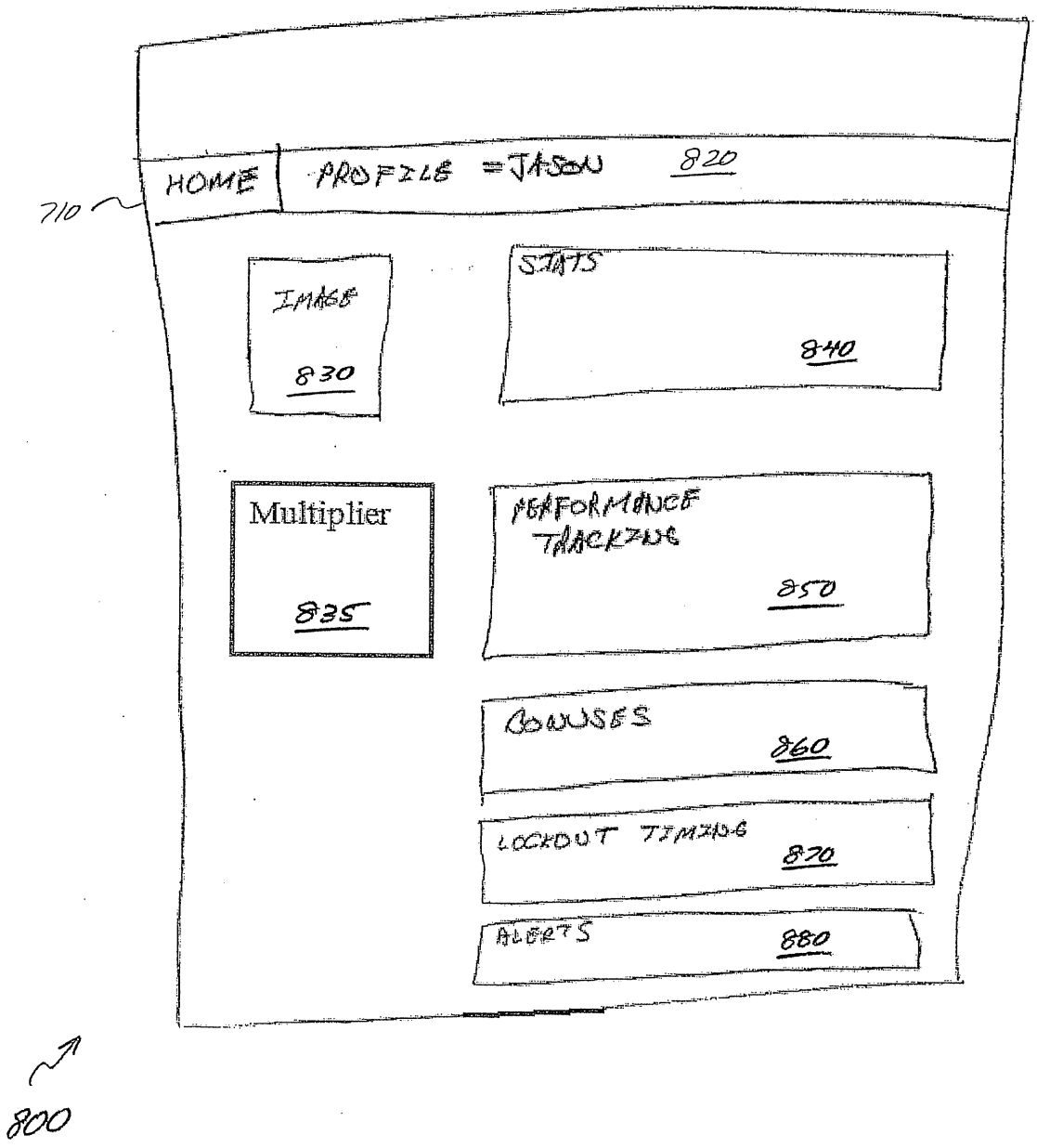

HOME
PROFILE = JASON
820
710
IMAGE
830
STATS
840
Multiplier
835
PERFORMANCE TRACKING
850
BONUSES
860
LOCKOUT TIMING
870
ALERTS
880
800

Figure 9

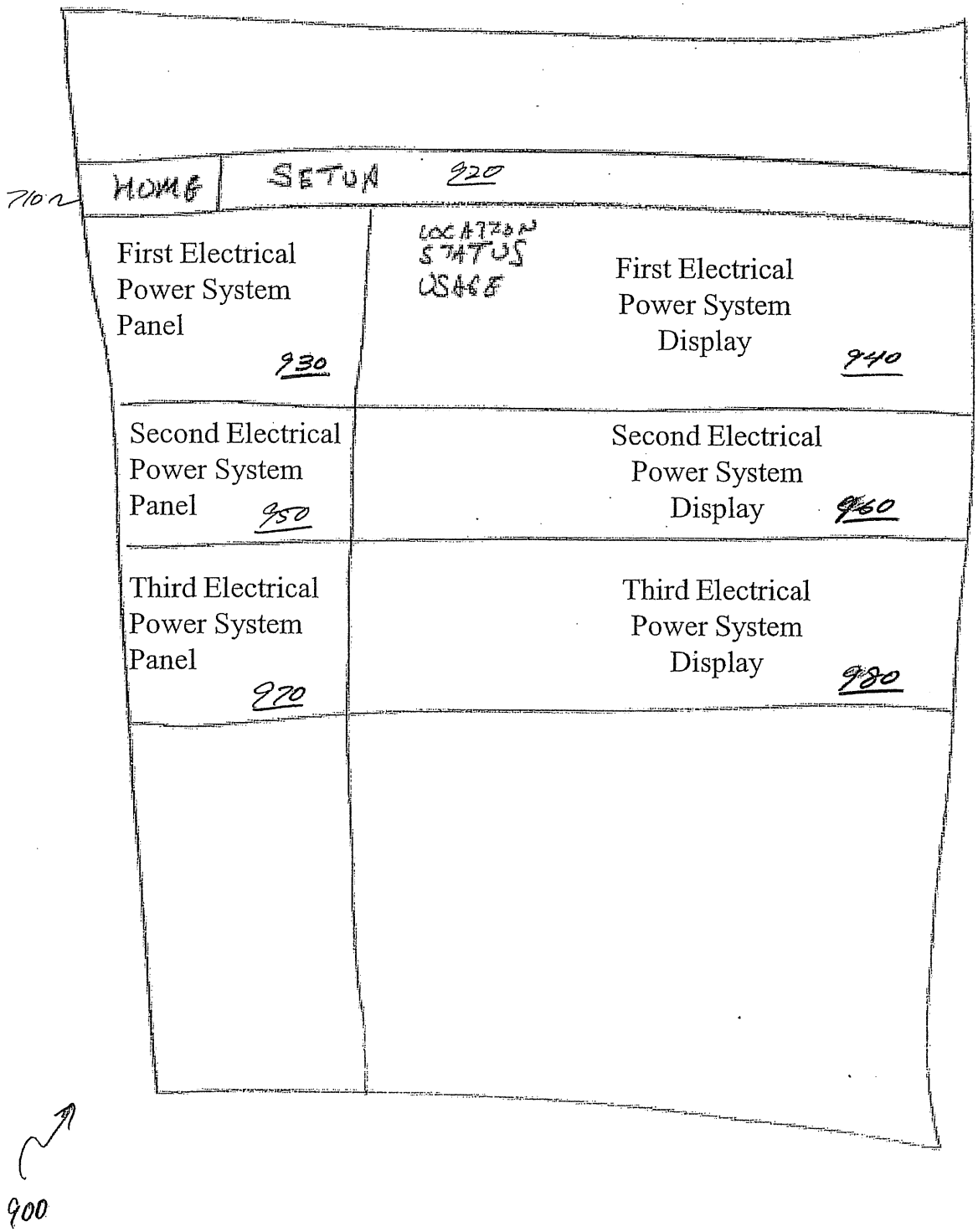

HOME
SETUP
920
710
First Electrical Power System Panel
930
LOCATION STATUS USAGE
First Electrical Power System Display
940
Second Electrical Power System Panel
950
Second Electrical Power System Display
960
Third Electrical Power System Panel
970
Third Electrical Power System Display
980
900

Figure 10

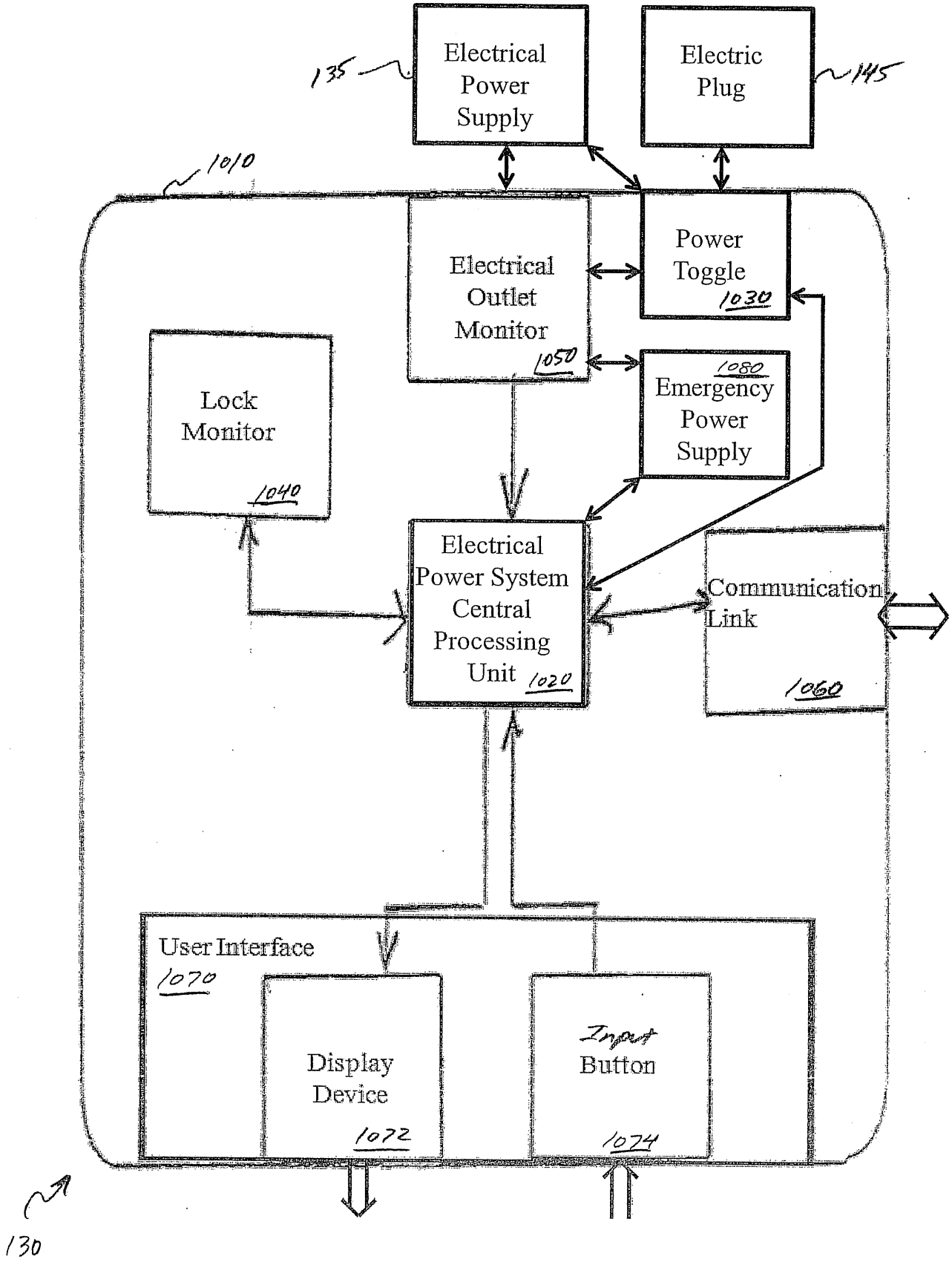

135
Electrical Power Supply
Electric Plug
145
1010
Electrical Outlet Monitor
1050
Power Toggle
1030
1080
Emergency Power Supply
Lock Monitor
1040
Electrical Power System Central Processing Unit
1020
Communication Link
1060
User Interface
1070
Display Device
1072
Input Button
1074
130

Figure 11

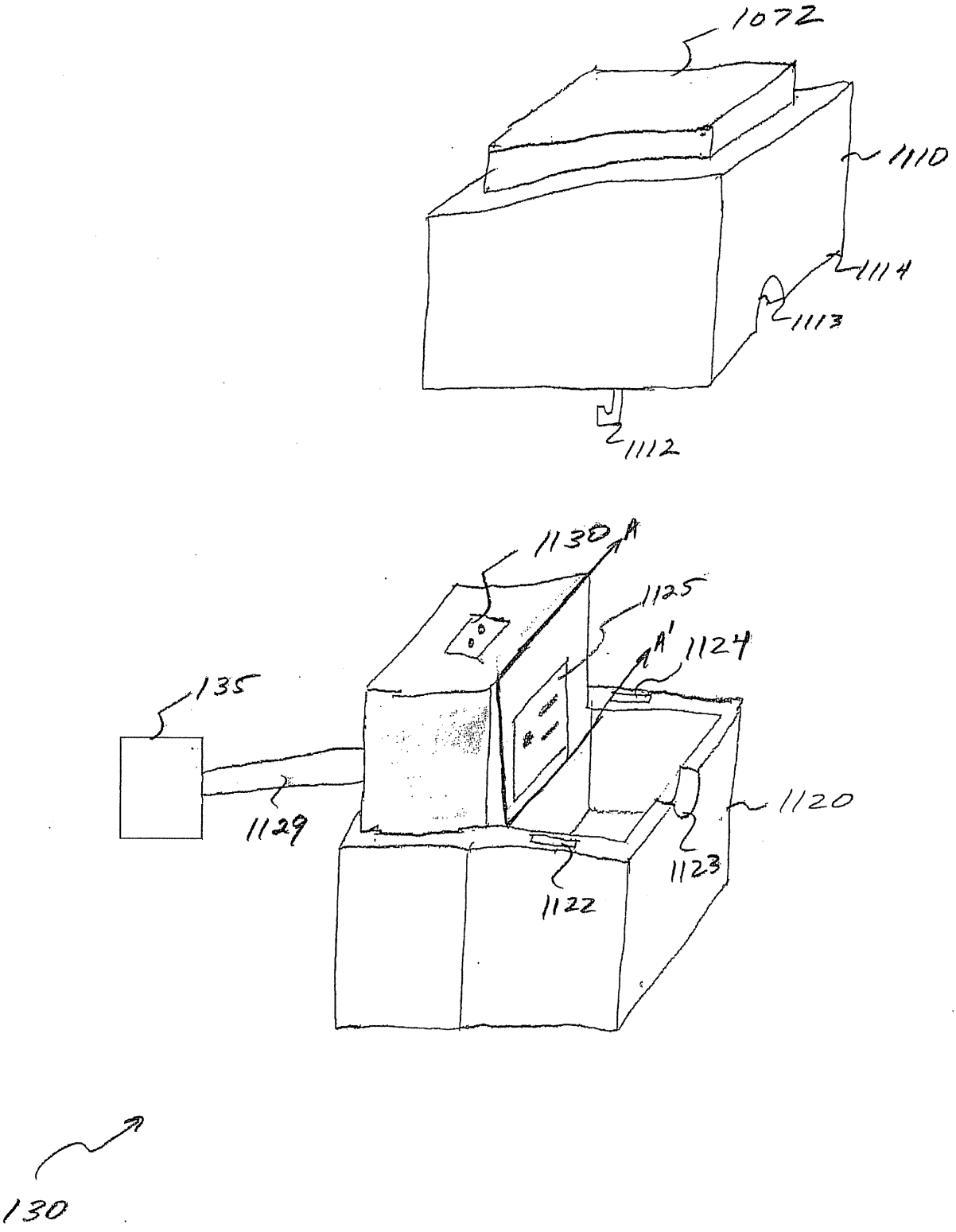

1072
1110
1114
1113
1112
1130
A
1125
A'
1124
135
1129
1120
1123
1122
130

Figure 12

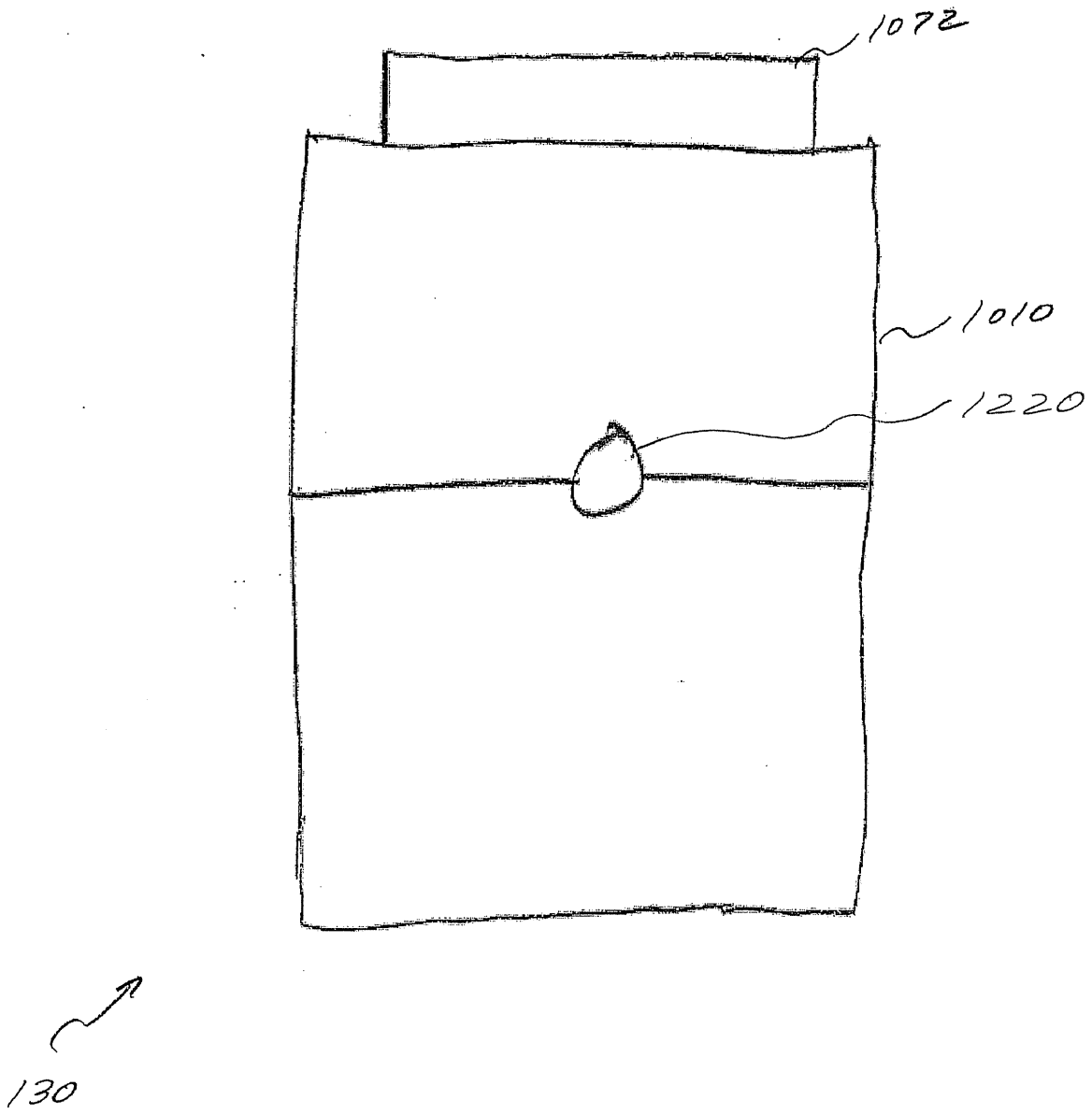


Figure 13

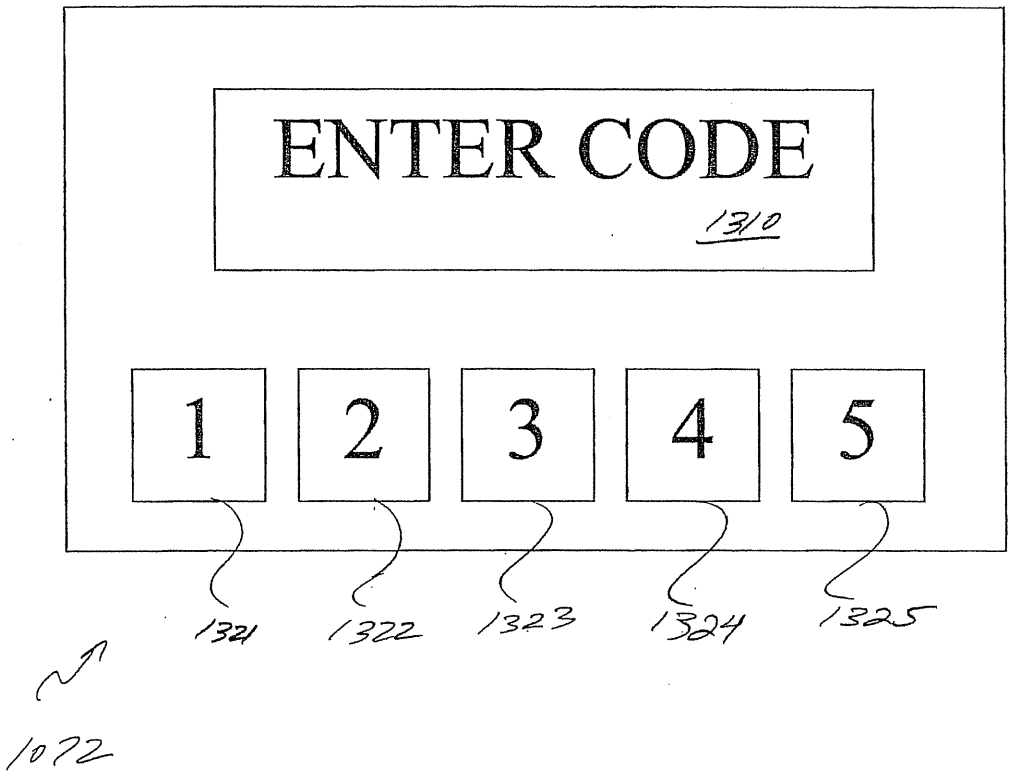


Figure 14

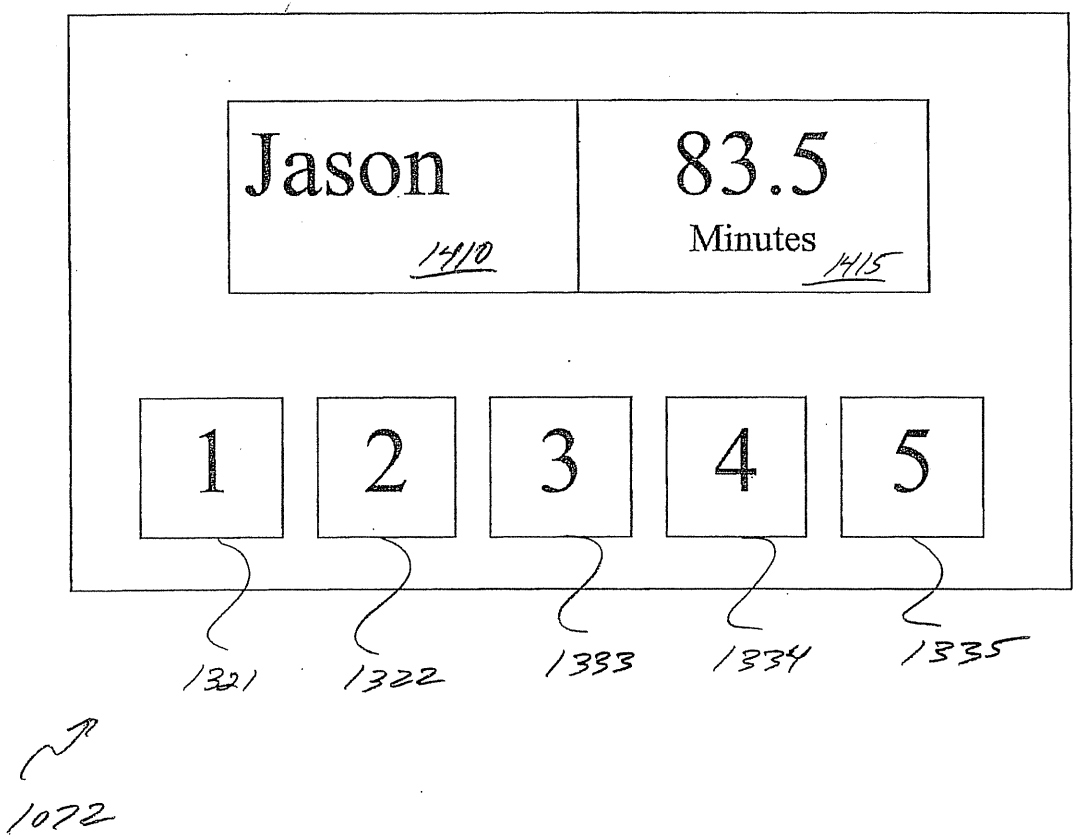

Jason
1410
83.5
Minutes
1415
1
2
3
4
5
1321
1322
1333
1334
1335
1072

Figure 15

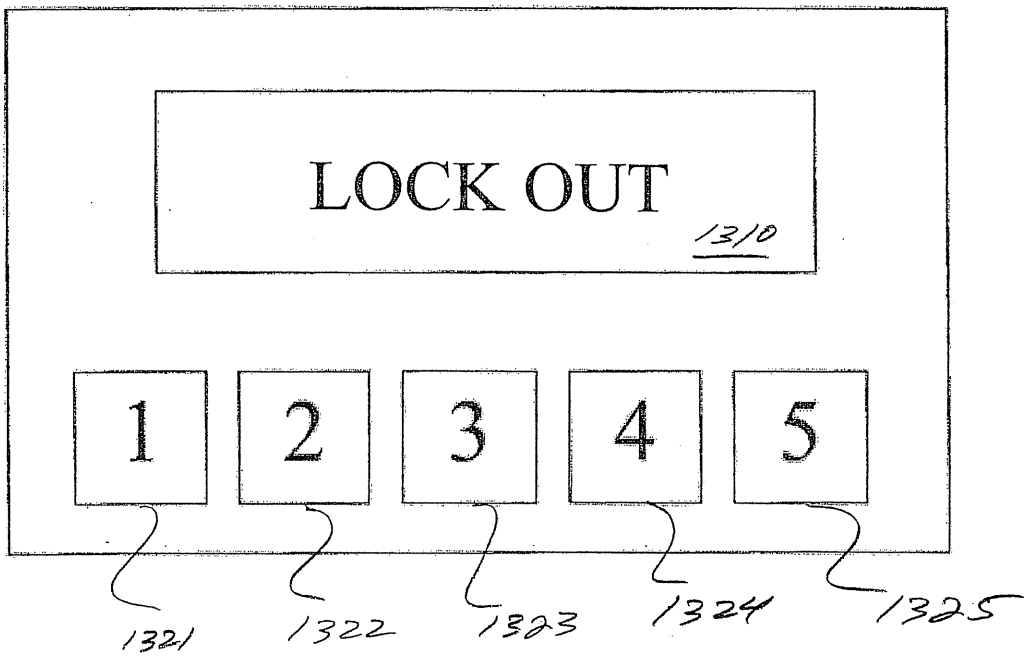
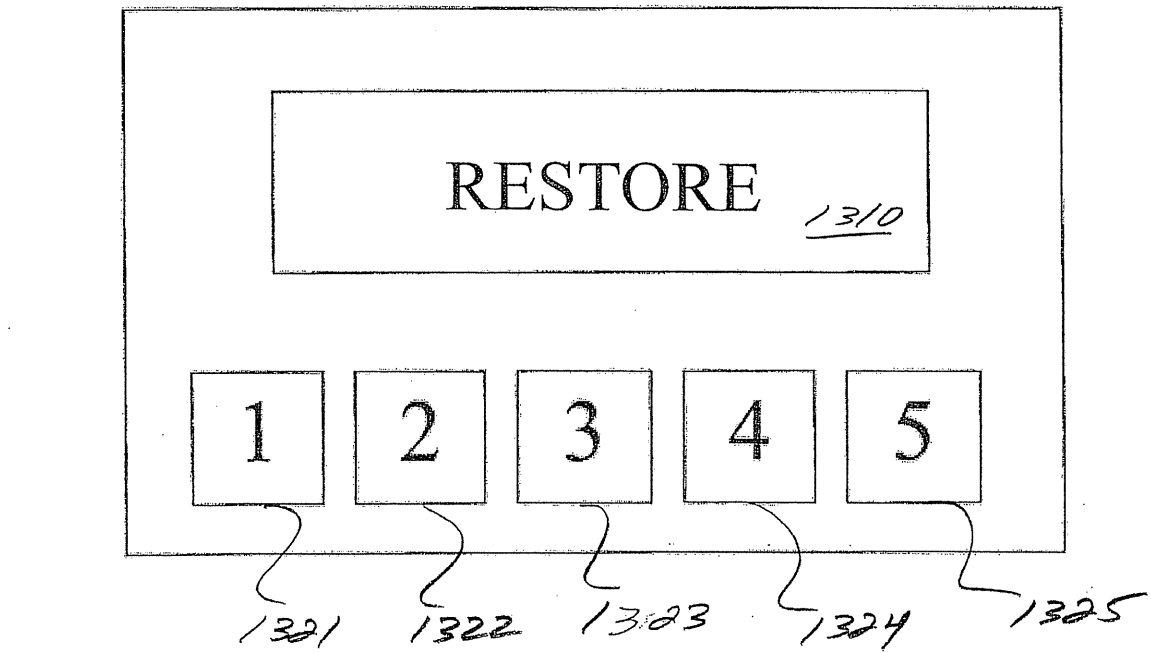


Figure 16



102101

Figure 17

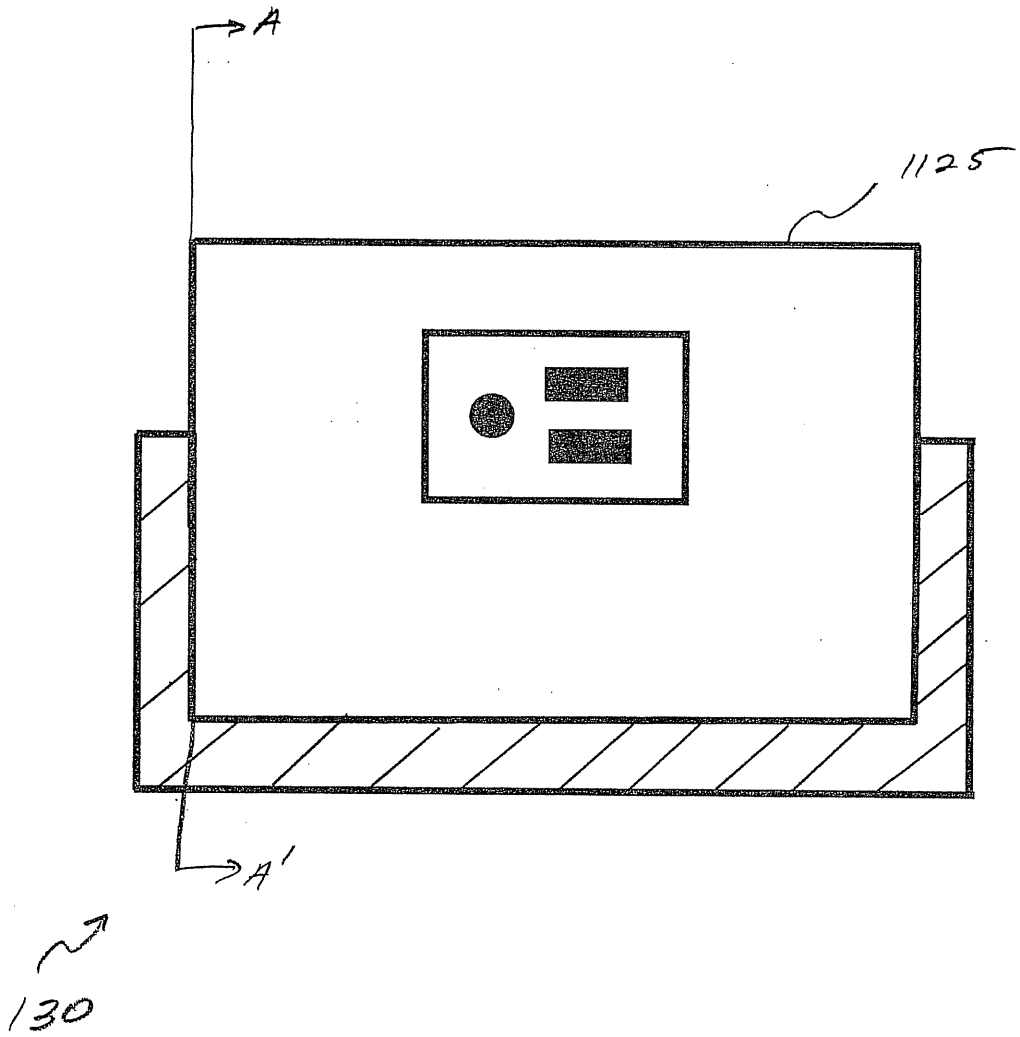


Figure 18

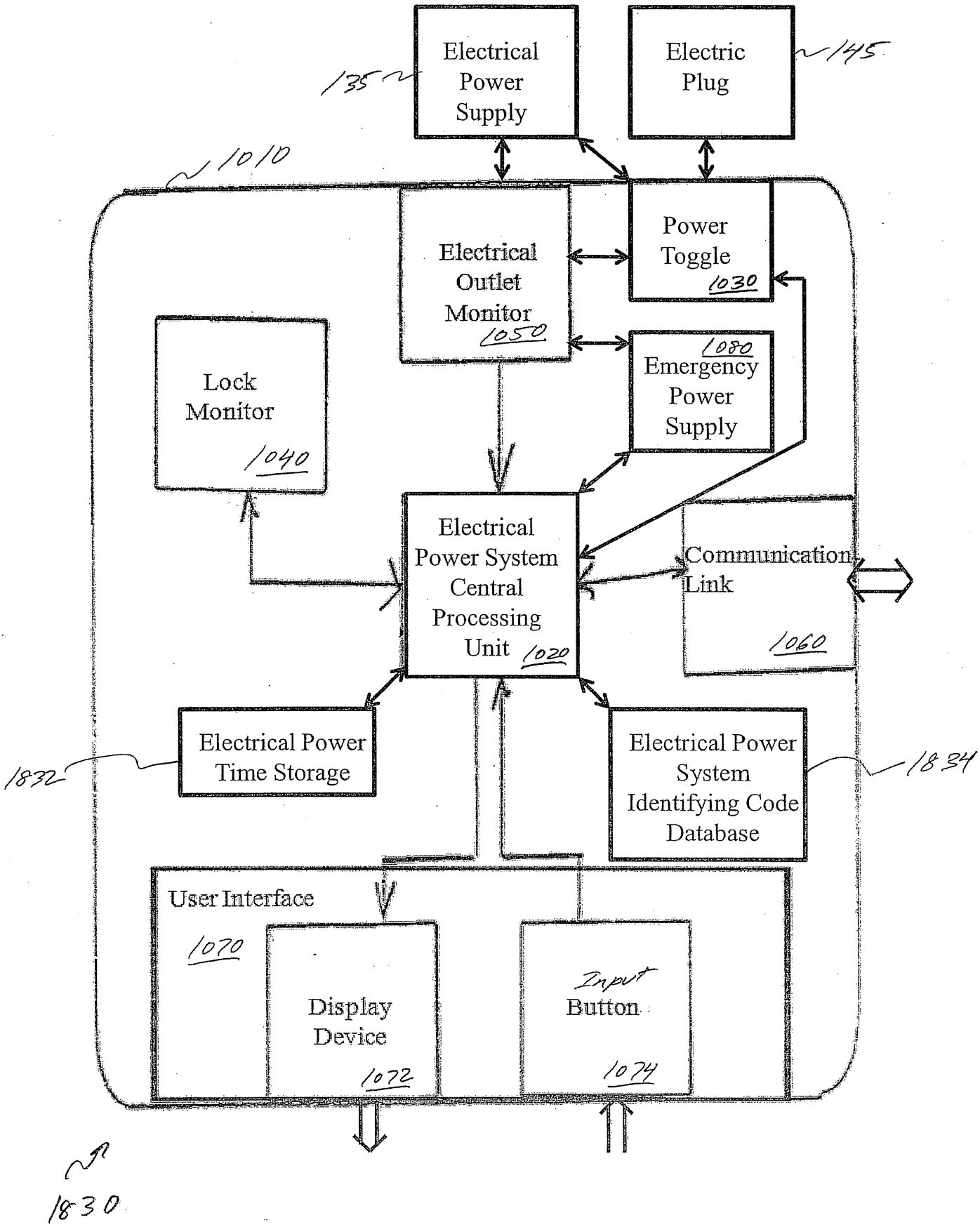

Electrical Power Supply
135
Electric Plug
145
1010
Electrical Outlet Monitor
1050
Power Toggle
1030
1080
Emergency Power Supply
Lock Monitor
1040
Electrical Power System Central Processing Unit
1020
Communication Link
1060
Electrical Power Time Storage
1832
Electrical Power System Identifying Code Database
1834
User Interface
1070
Display Device
1072
Input Button
1074
1830

Figure 19

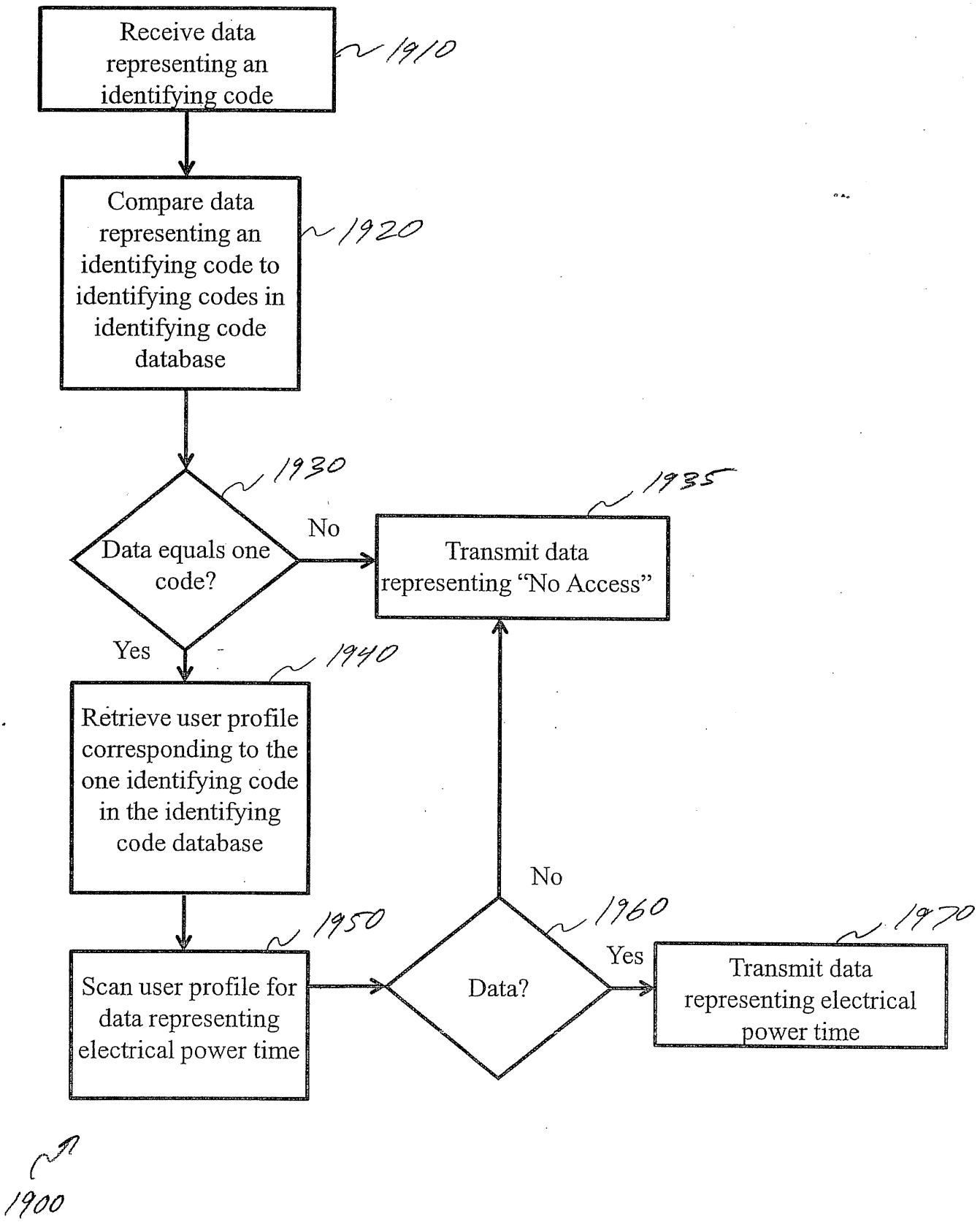

Receive data representing an identifying code
1910
Compare data representing an identifying code to identifying codes in identifying code database
1920
1930
Data equals one code?
No
1935
Transmit data representing "No Access"
Yes
1940
Retrieve user profile corresponding to the one identifying code in the identifying code database
1950
Scan user profile for data representing electrical power time
1960
Data?
No
Yes
1970
Transmit data representing electrical power time
1900

Figure 20

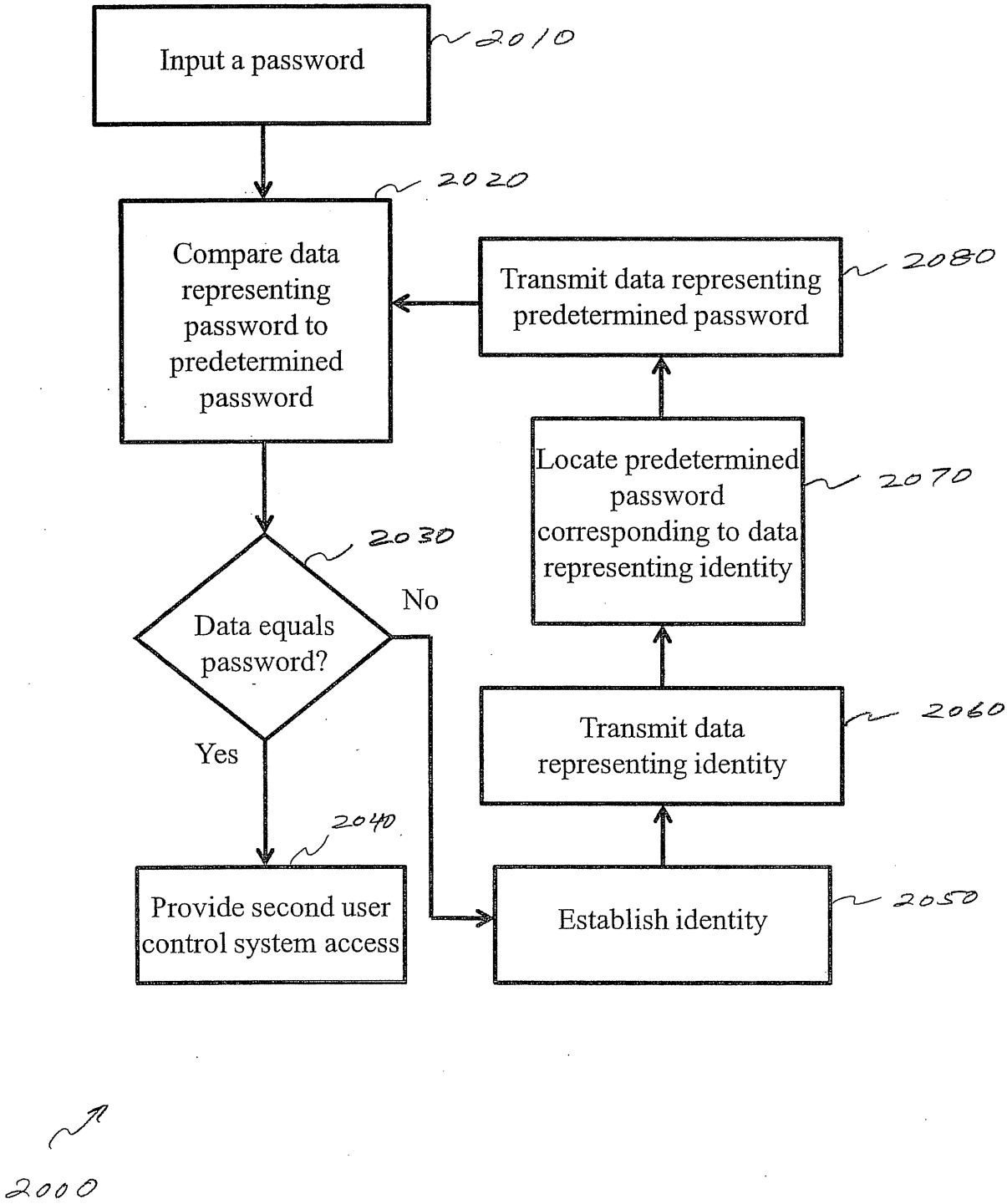

Input a password
2010
Compare data representing password to predetermined password
2020
Transmit data representing predetermined password
2080
Locate predetermined password corresponding to data representing identity
2070
Data equals password?
2030
No
Yes
Transmit data representing identity
2060
Provide second user control system access
2040
Establish identity
2050
2000

Figure 21

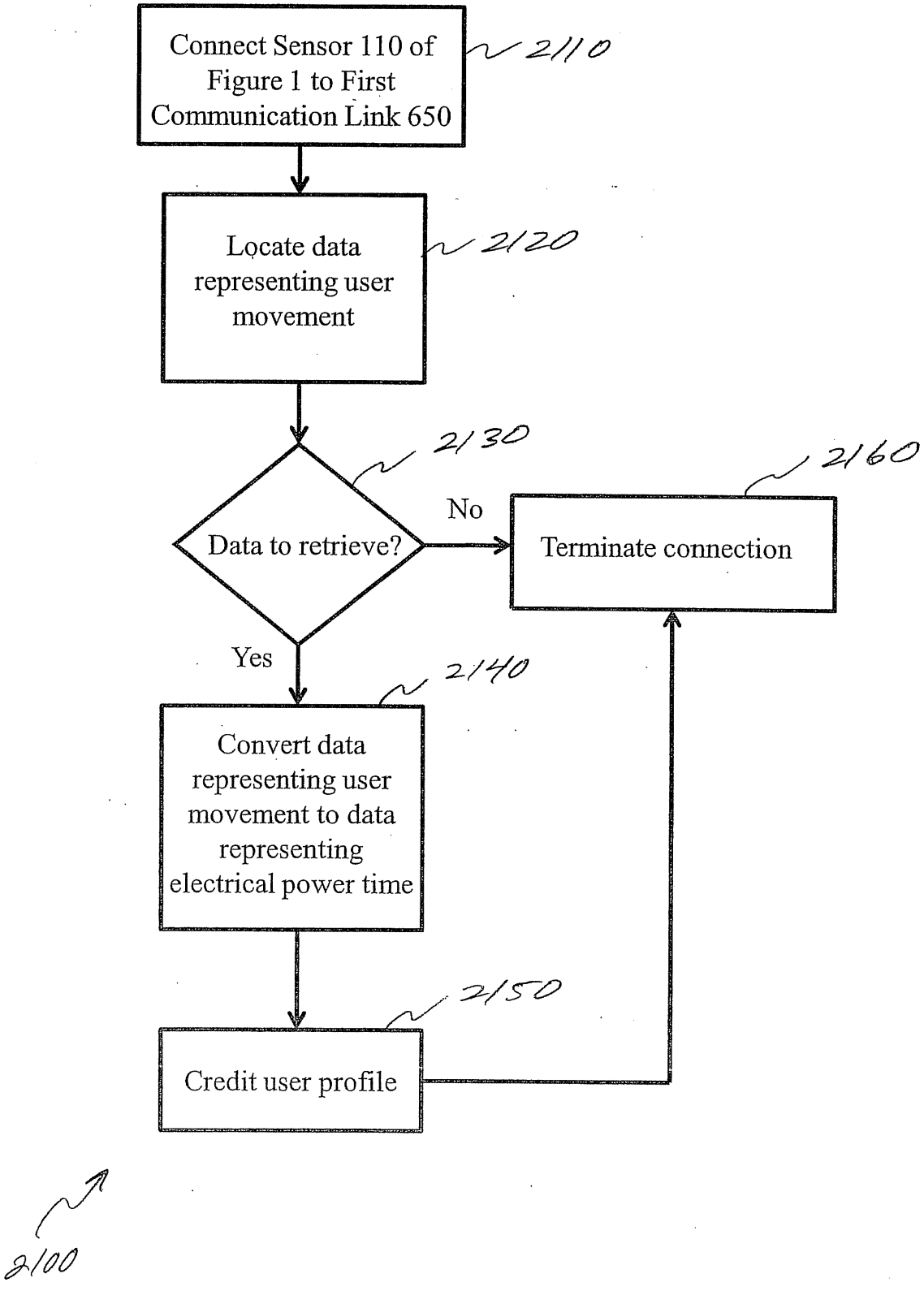
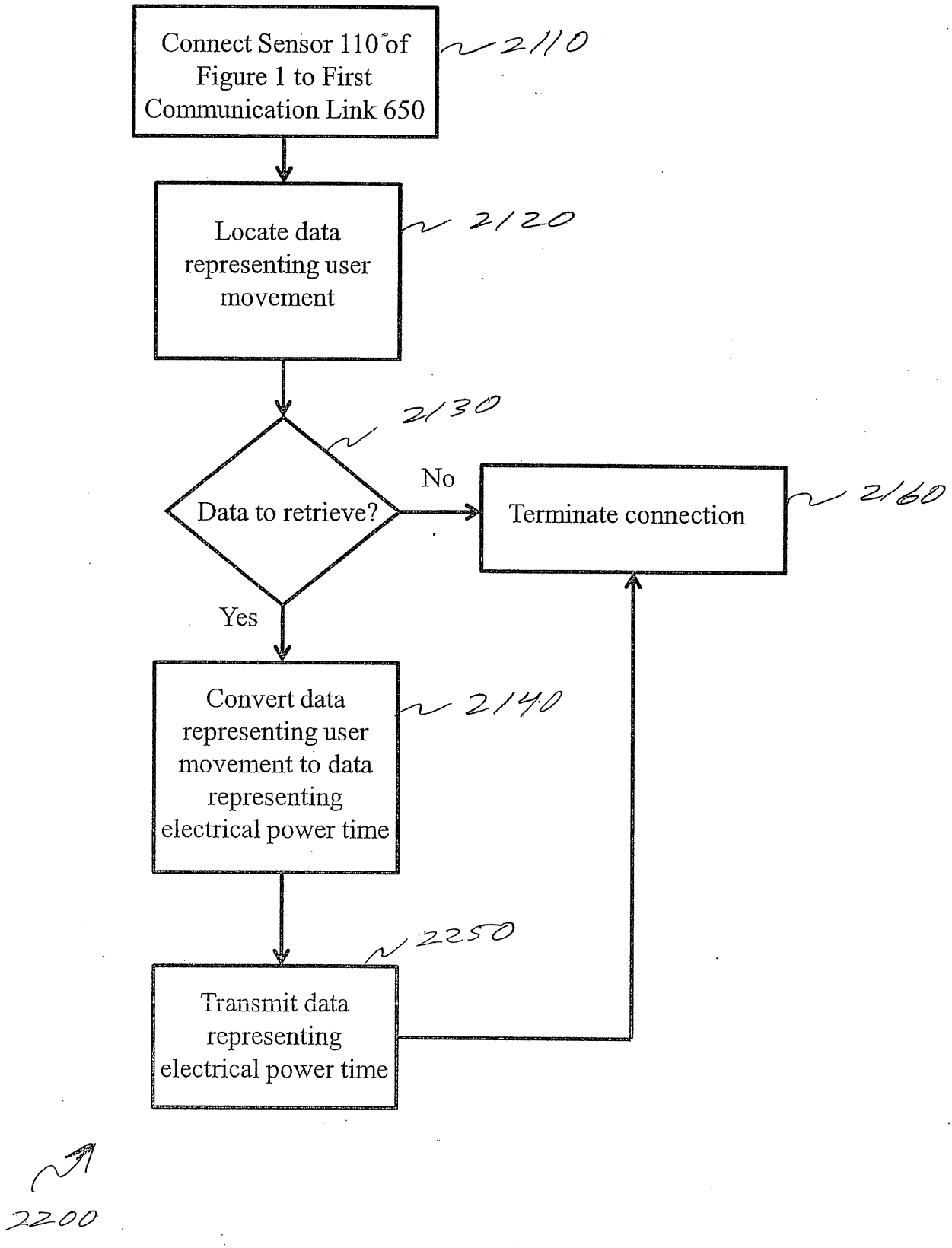

Connect Sensor 110 of Figure 1 to First Communication Link 650
2110
Locate data representing user movement
2120
2130
Data to retrieve?
No
2160
Terminate connection
Yes
2140
Convert data representing user movement to data representing electrical power time
2150
Credit user profile
2100

Figure 22


Connect Sensor 110 of Figure 1 to First Communication Link 650
2110
Locate data representing user movement
2120
2130
Data to retrieve?
No
Terminate connection
2160
Yes
Convert data representing user movement to data representing electrical power time
2140
2250
Transmit data representing electrical power time
2200