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(12) **United States Patent**
Edelman

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(45) **Date of Patent: Aug. 12, 2025**

(54) **OUTDOOR CHAISE LOUNGE WITH INTEGRATED LOCK-BOX AND COMMUNICATIONS SYSTEM**

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(72) Inventor: **Michael Edelman**, New York, NY (US)

(73) Assignee: **Loungera, Inc.**, Bedford, NY (US)

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

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(65) **Prior Publication Data**

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Related U.S. Application Data

(63) Continuation of application No. 16/861,006, filed on Apr. 28, 2020, now Pat. No. 11,885,172, which is a (Continued)

(51) **Int. Cl.**

A47C 1/14	(2006.01)
A47C 3/04	(2006.01)
A47C 7/40	(2006.01)
A47C 7/62	(2006.01)
E05G 1/00	(2006.01)
G08B 7/06	(2006.01)
H02J 7/00	(2006.01)

(Continued)

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

CPC ***E05G 1/005*** (2013.01); ***A47C 1/143*** (2013.01); ***A47C 3/04*** (2013.01); ***A47C 7/40*** (2013.01); ***A47C 7/62*** (2013.01); ***A47C 7/622*** (2018.08); ***G08B 7/06*** (2013.01); ***H02J 7/0044*** (2013.01); ***H02S 40/38*** (2014.12); ***H02S 99/00*** (2013.01); *A47C 7/725* (2013.01); *E05B 47/0001* (2013.01); *E05B 2047/0058* (2013.01); *E05B 2047/0095* (2013.01); *E05B 65/0075* (2013.01); *H02J 7/35* (2013.01)

(58) **Field of Classification Search**

CPC A47C 1/143

See application file for complete search history.

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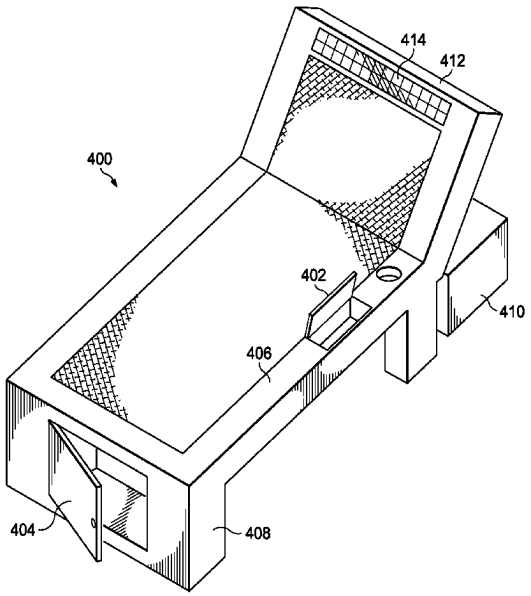
Primary Examiner — Timothy J Brindley

(74) *Attorney, Agent, or Firm* — Bochner PLLC; Andrew D Bochner

(57) **ABSTRACT**

An outdoor chaise lounge including a lock-box integrated therein. The chaise lounge may have a photovoltaic device mounted to a portion of a seat member where a user rests his or her head, and the lock-box may be positioned below a foot portion of the seat member. The foot portion of the seat member may be configured to be rotated upwards to enable a user to access the lock-box. In an embodiment, electronic devices may be integrated into a member of the chaise lounge, such as a leg member, frame member, or armrest, and be configured to enable a user to order food, beverages, attendants, or perform other communications with a billing or other system of a venue (e.g., hotel, cruise ship, etc.) via a wireless communication.

18 Claims, 15 Drawing Sheets



Related U.S. Application Data

continuation of application No. 15/809,983, filed on Nov. 10, 2017, now Pat. No. 10,633,911.

(51) **Int. Cl.**

H02S 40/38	(2014.01)
H02S 99/00	(2014.01)
A47C 7/72	(2006.01)
E05B 47/00	(2006.01)
E05B 65/00	(2006.01)
H02J 7/35	(2006.01)

(56) **References Cited**

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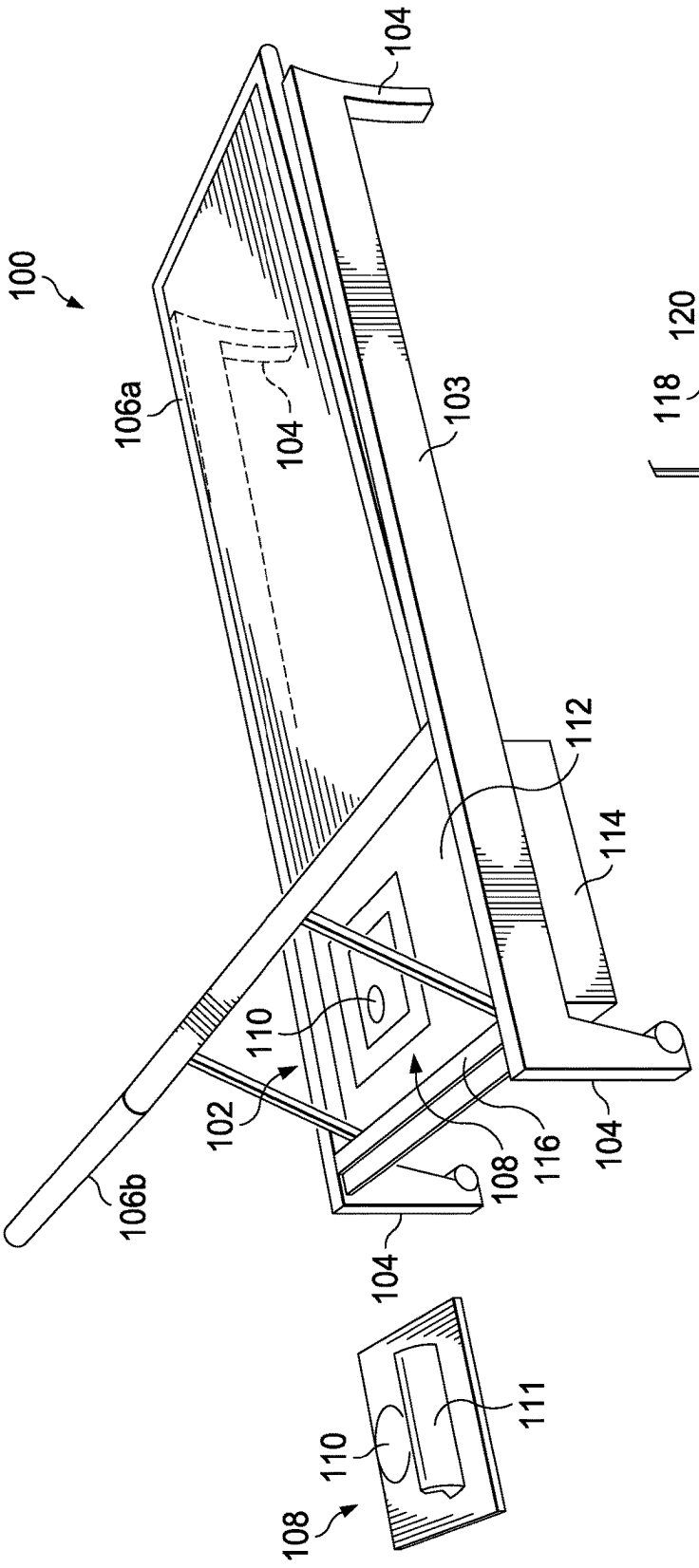

100
104
106a
104
103
112
114
110
102
108
116
104
106b
104
110
111
108

FIG. 1A

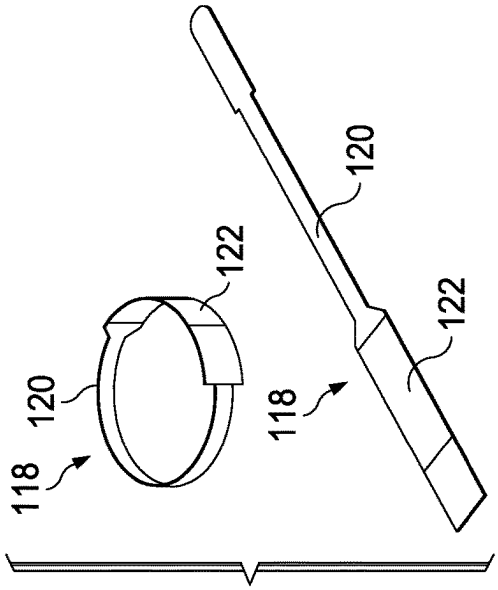

120
122
118
120
122
118

FIG. 1B

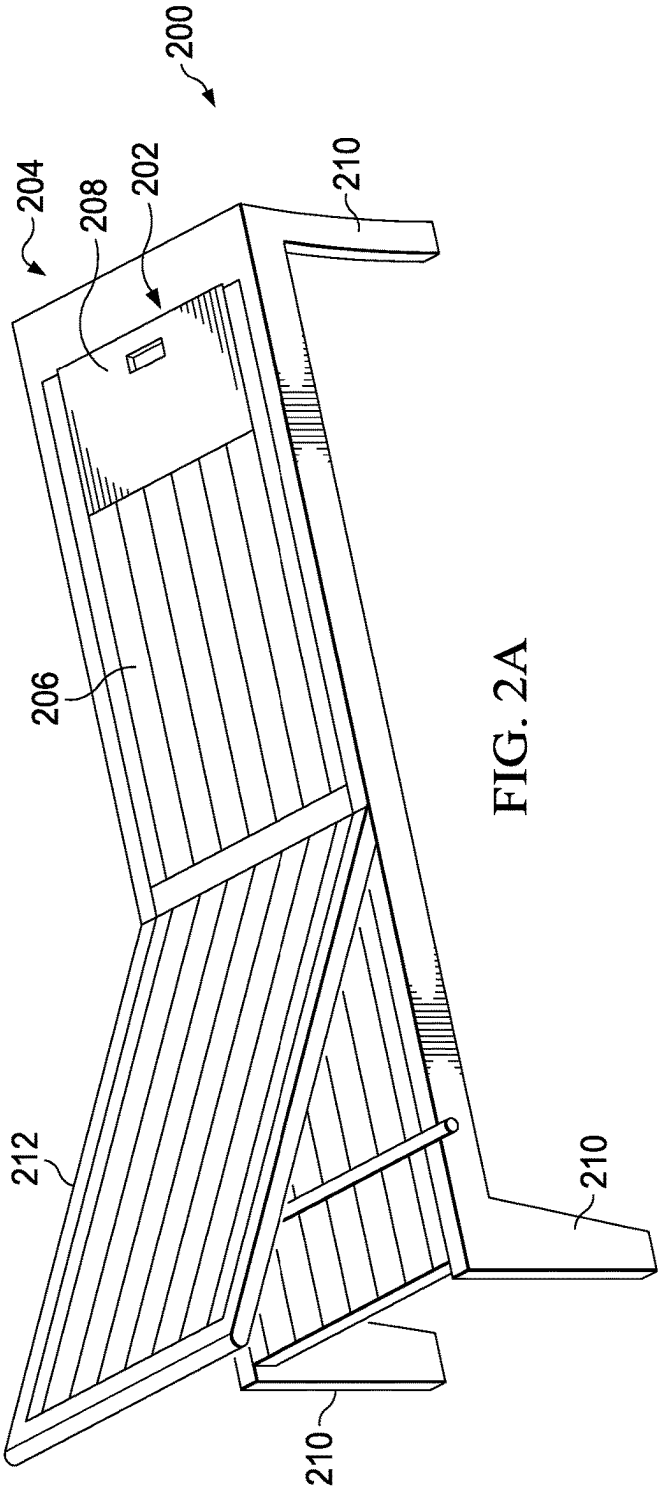
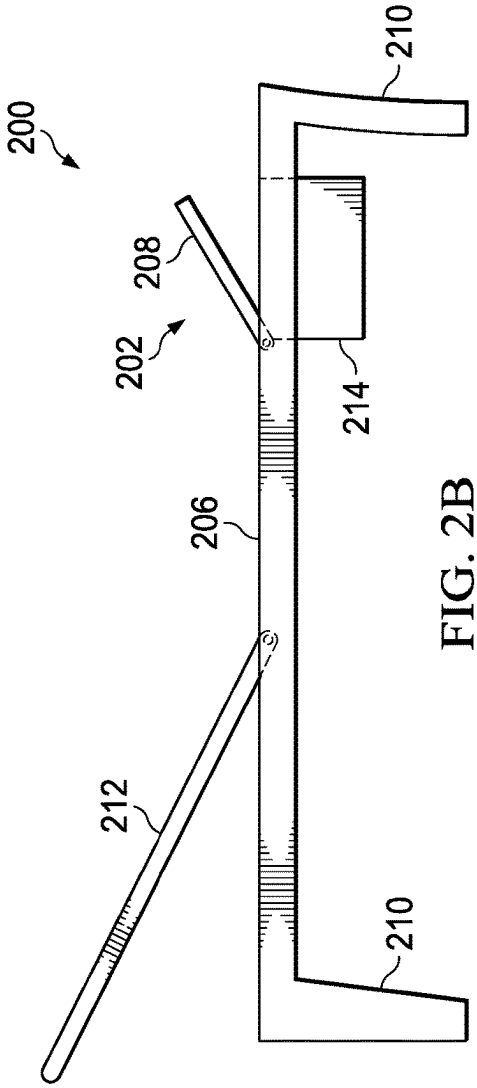

200
204
208
202
210
206
212
210
210

FIG. 2A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210
208
202
214
206
212
210

FIG. 2B

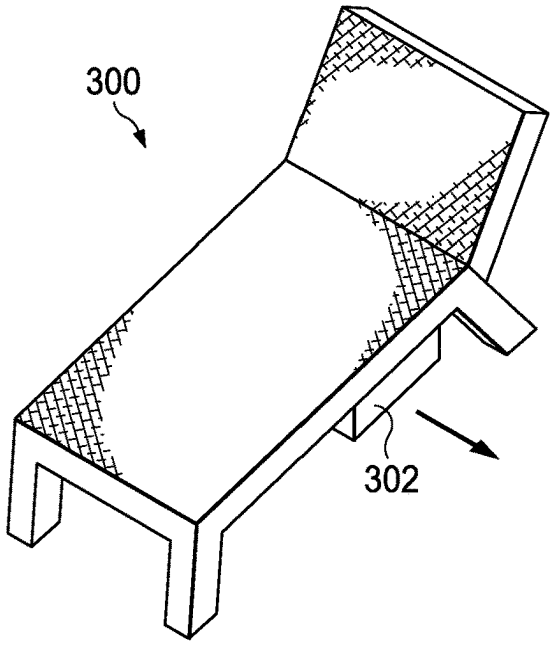

FIG. 3A

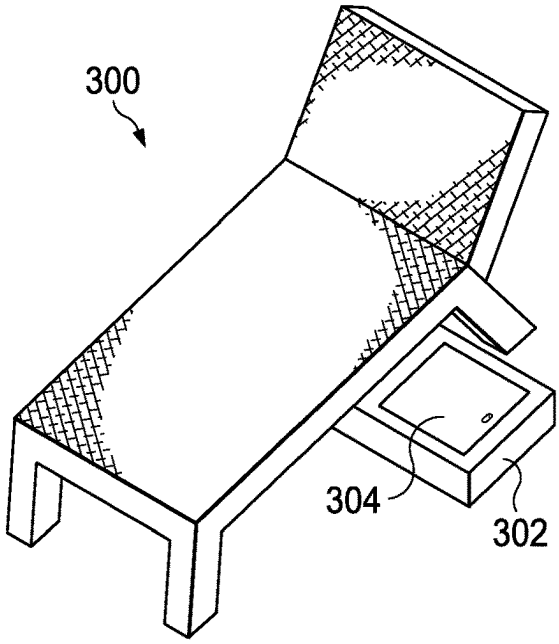

FIG. 3B

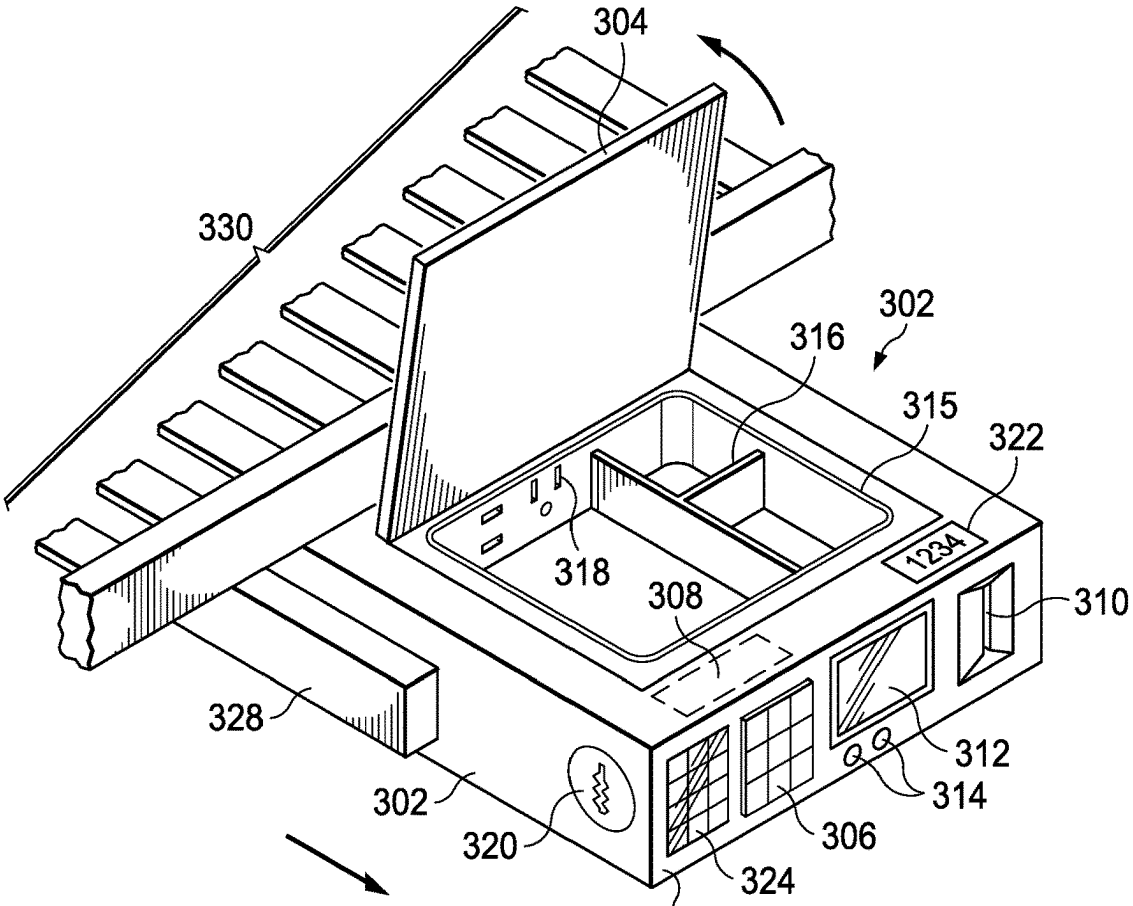

FIG. 3C

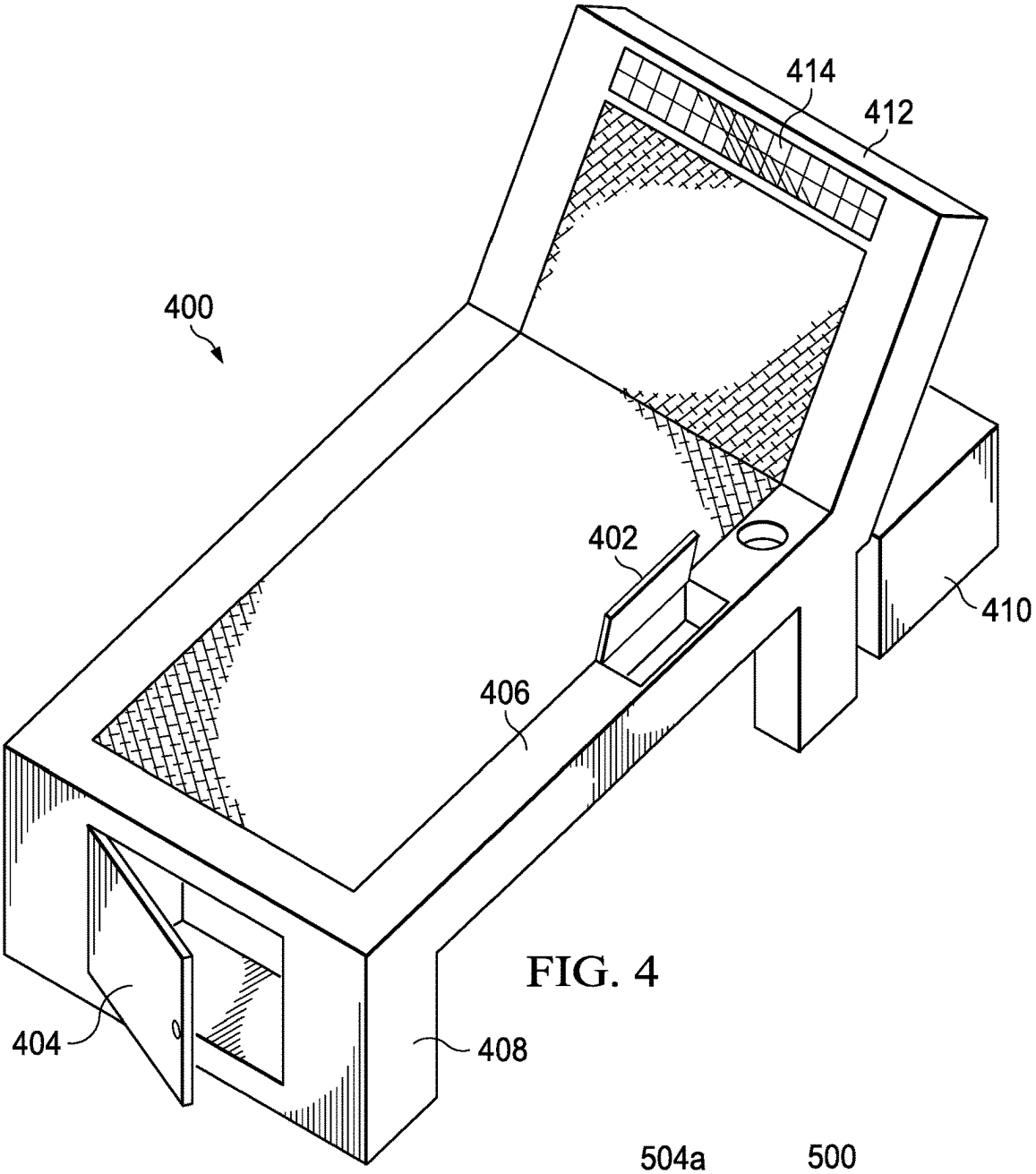
414
412
400
402
410
406
404
408

FIG. 4

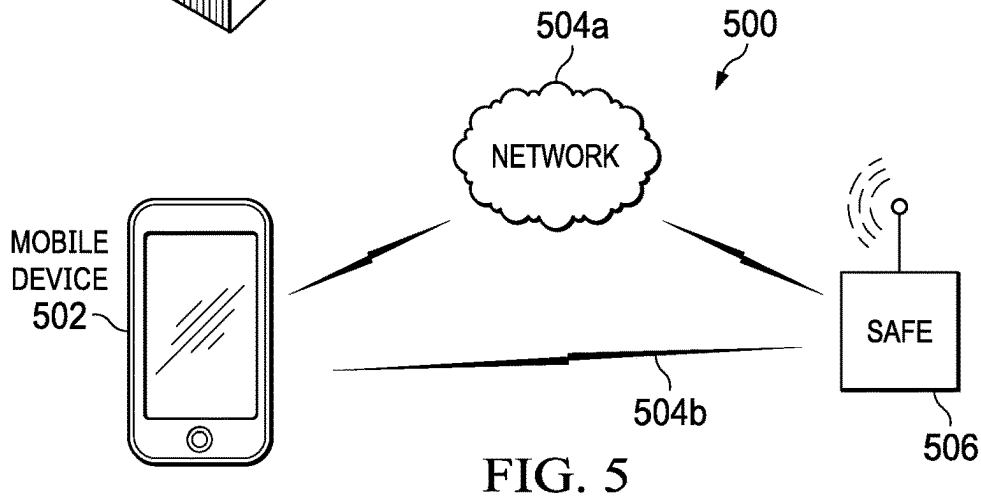
504a
500
NETWORK
MOBILE
DEVICE
502
SAFE
504b
506

FIG. 5

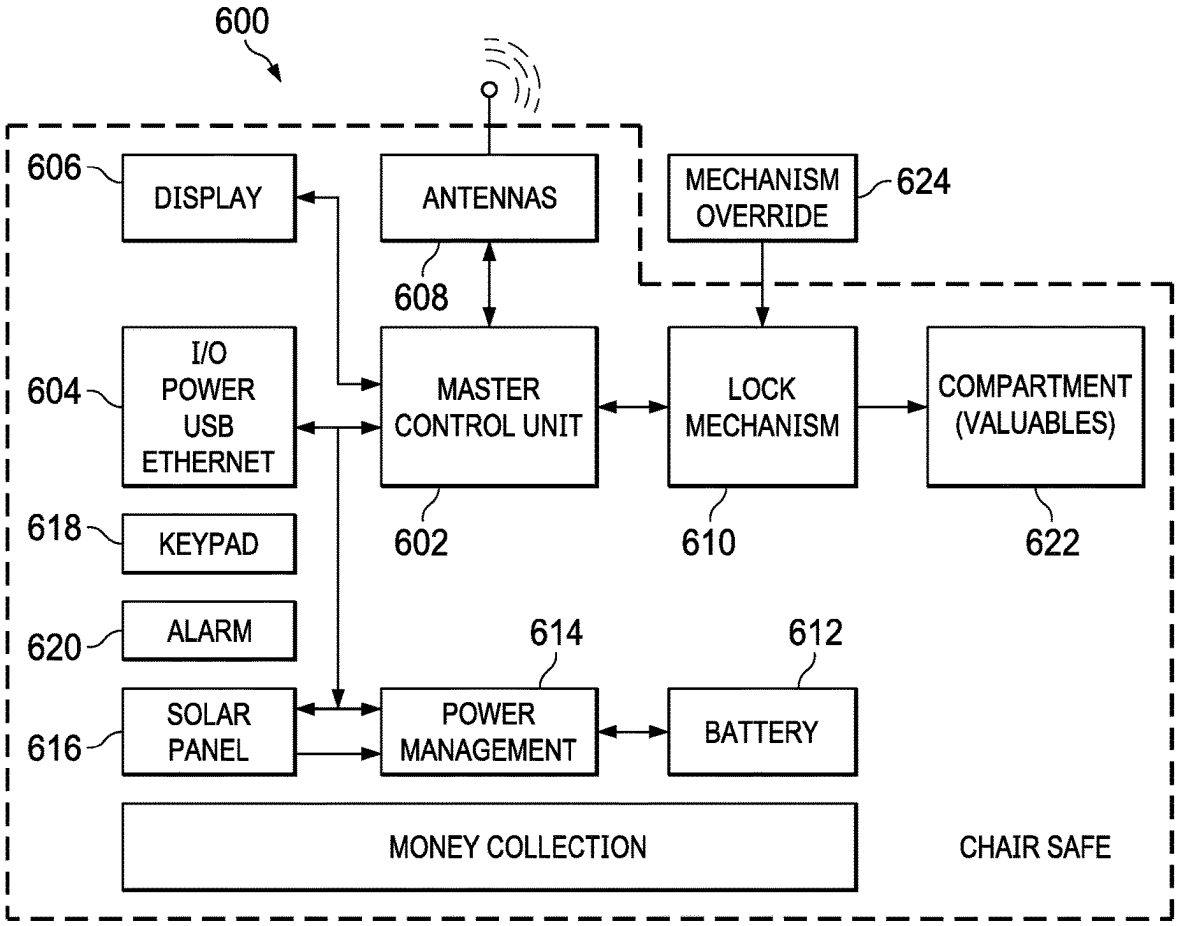
600
606
DISPLAY
ANTENNAS
MECHANISM OVERRIDE
624
608
604
I/O
POWER
USB
ETHERNET
MASTER CONTROL UNIT
LOCK MECHANISM
COMPARTMENT (VALUABLES)
618
KEYPAD
602
610
622
620
ALARM
614
612
616
SOLAR PANEL
POWER MANAGEMENT
BATTERY
MONEY COLLECTION
CHAIR SAFE

FIG. 6

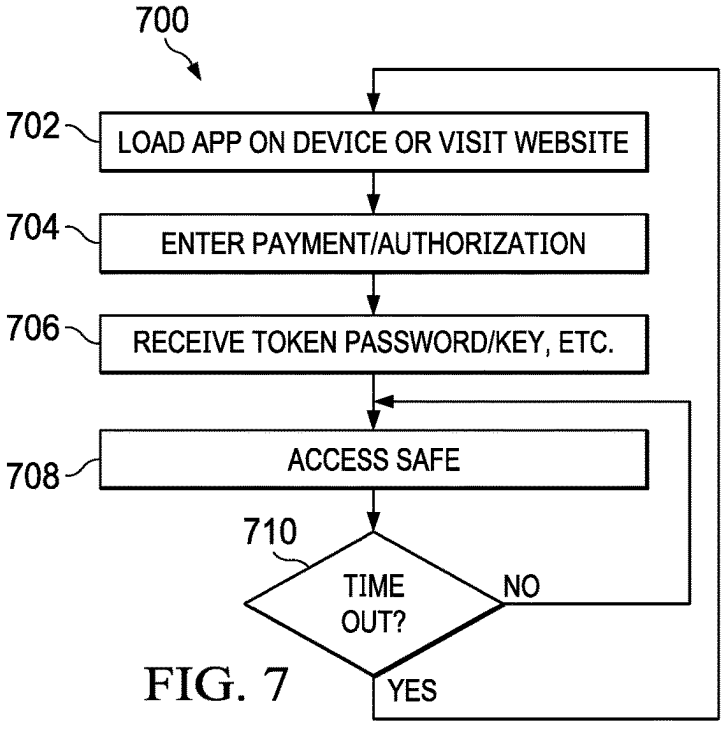
700
702
LOAD APP ON DEVICE OR VISIT WEBSITE
704
ENTER PAYMENT/AUTHORIZATION
706
RECEIVE TOKEN PASSWORD/KEY, ETC.
708
ACCESS SAFE
710
TIME OUT?
NO
YES

FIG. 7

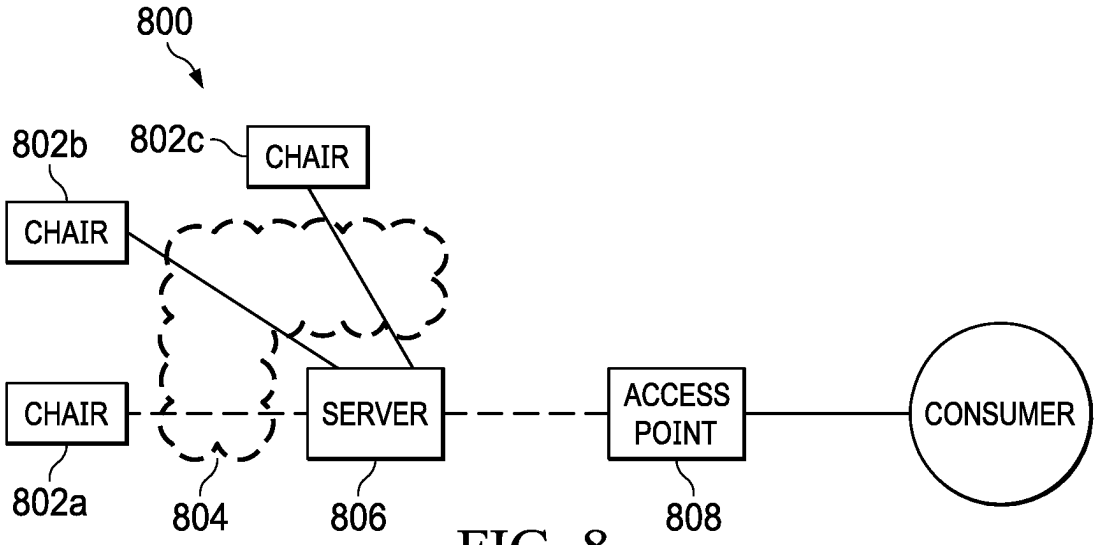
800
802b
802c
CHAIR
CHAIR
CHAIR
SERVER
ACCESS POINT
CONSUMER
802a
804
806
808

FIG. 8

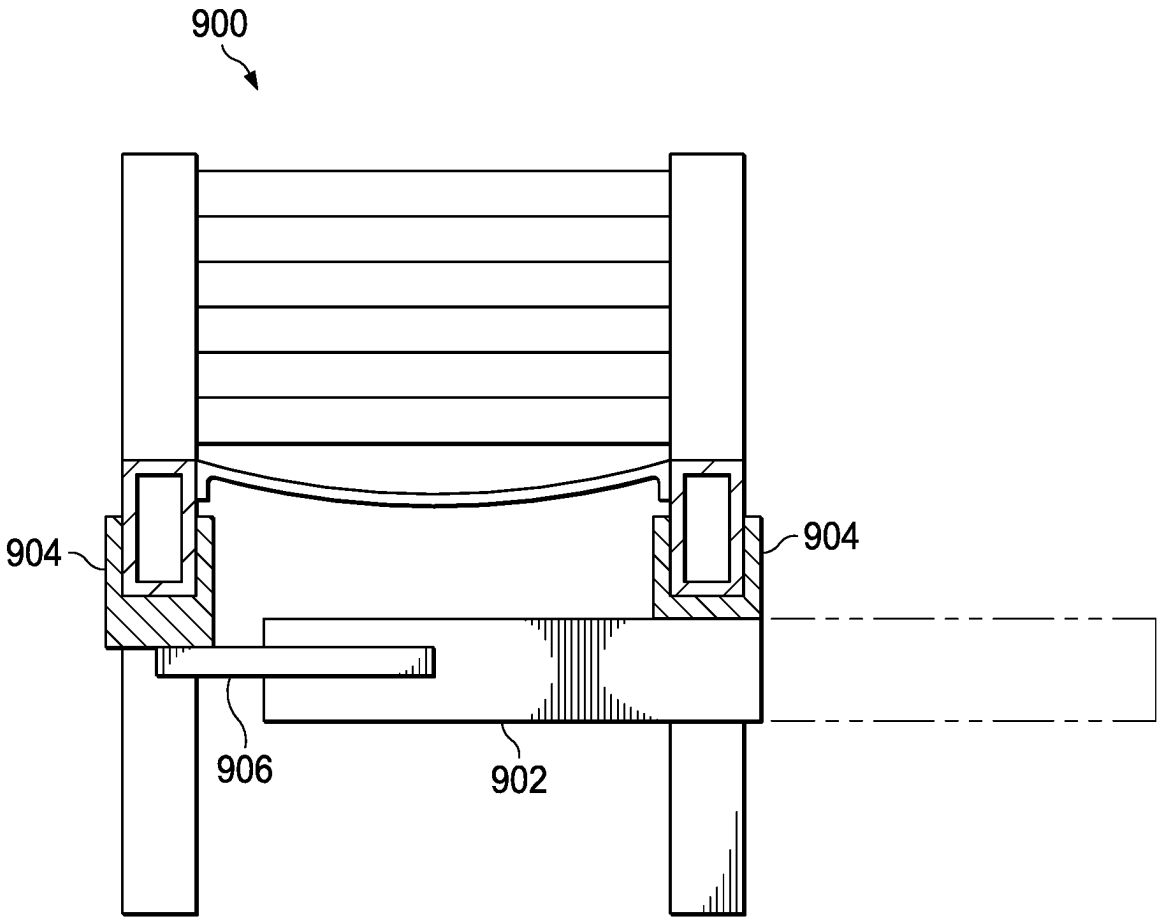
900
904
904
906
902

FIG. 9

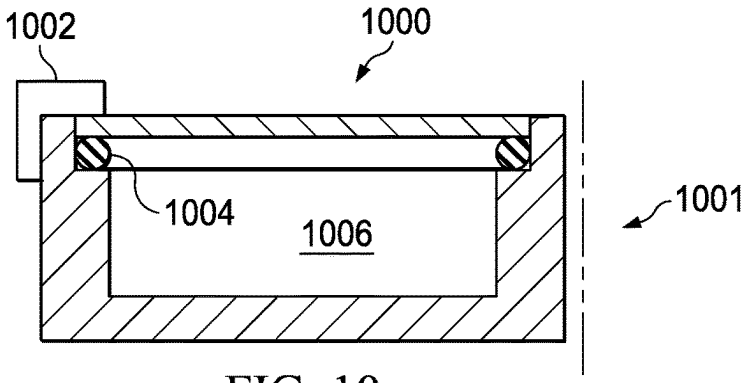

FIG. 10

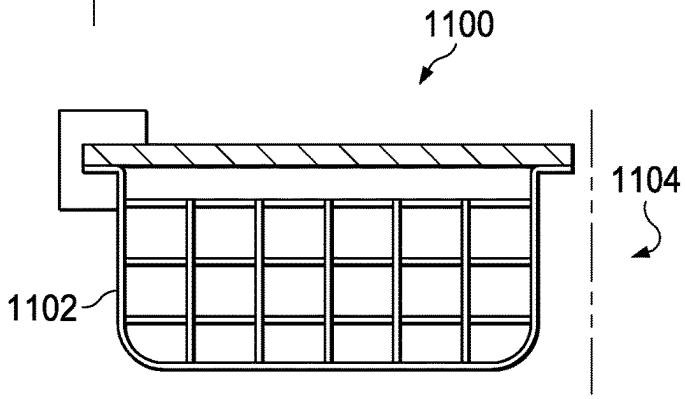

FIG. 11

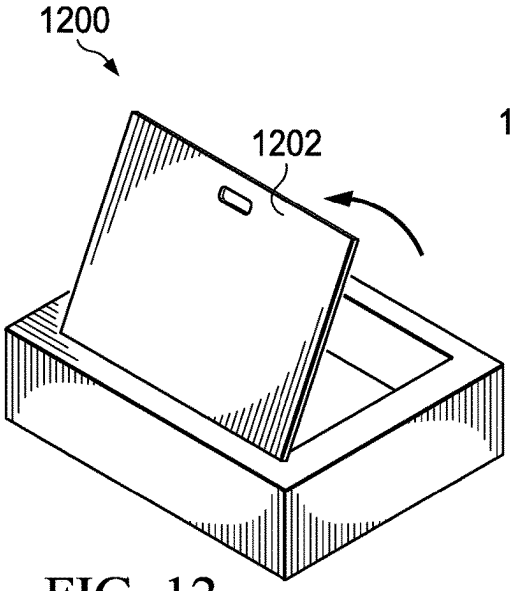

FIG. 12

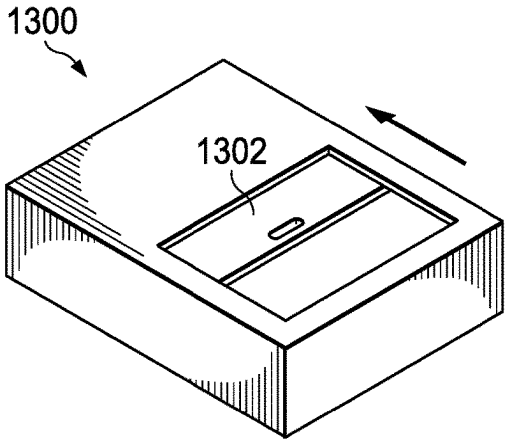

FIG. 13

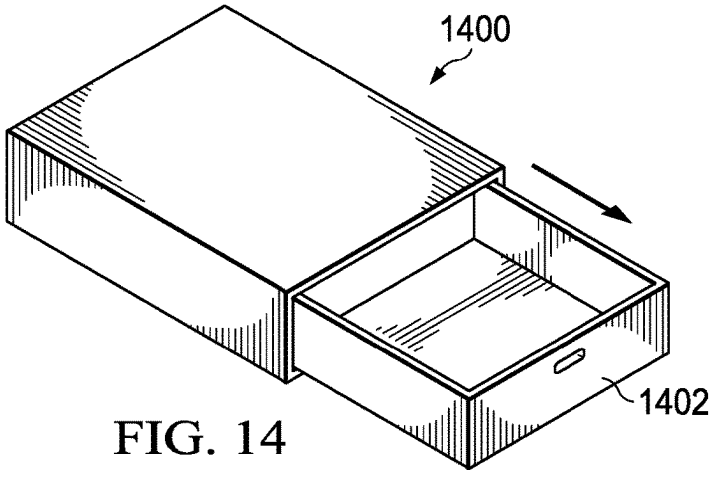

FIG. 14

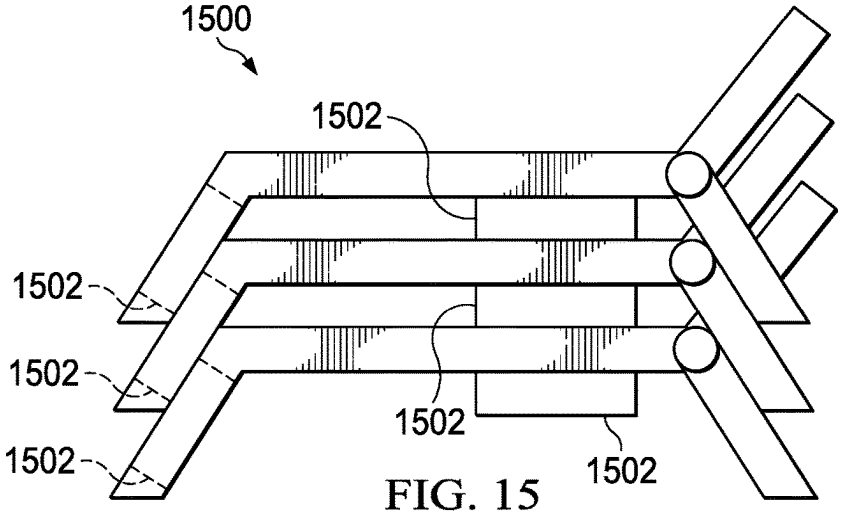

FIG. 15

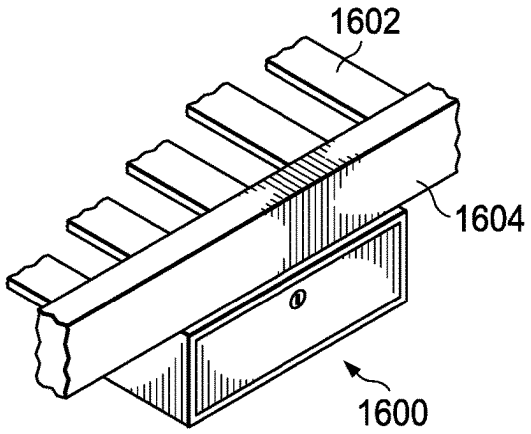

FIG. 16A

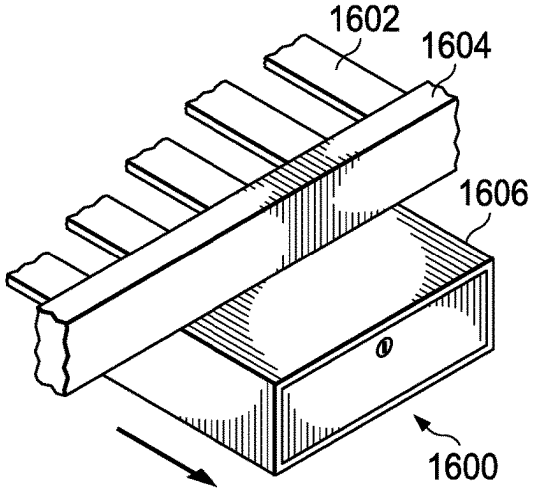

FIG. 16B

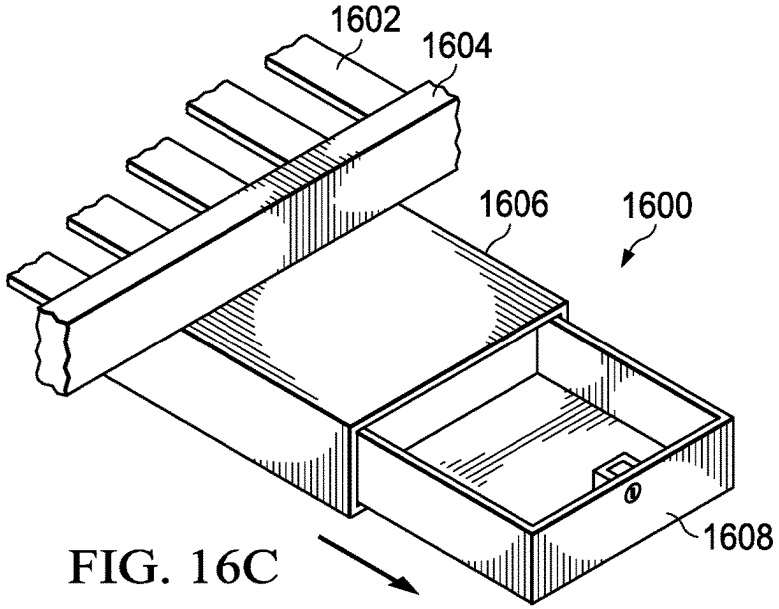

FIG. 16C

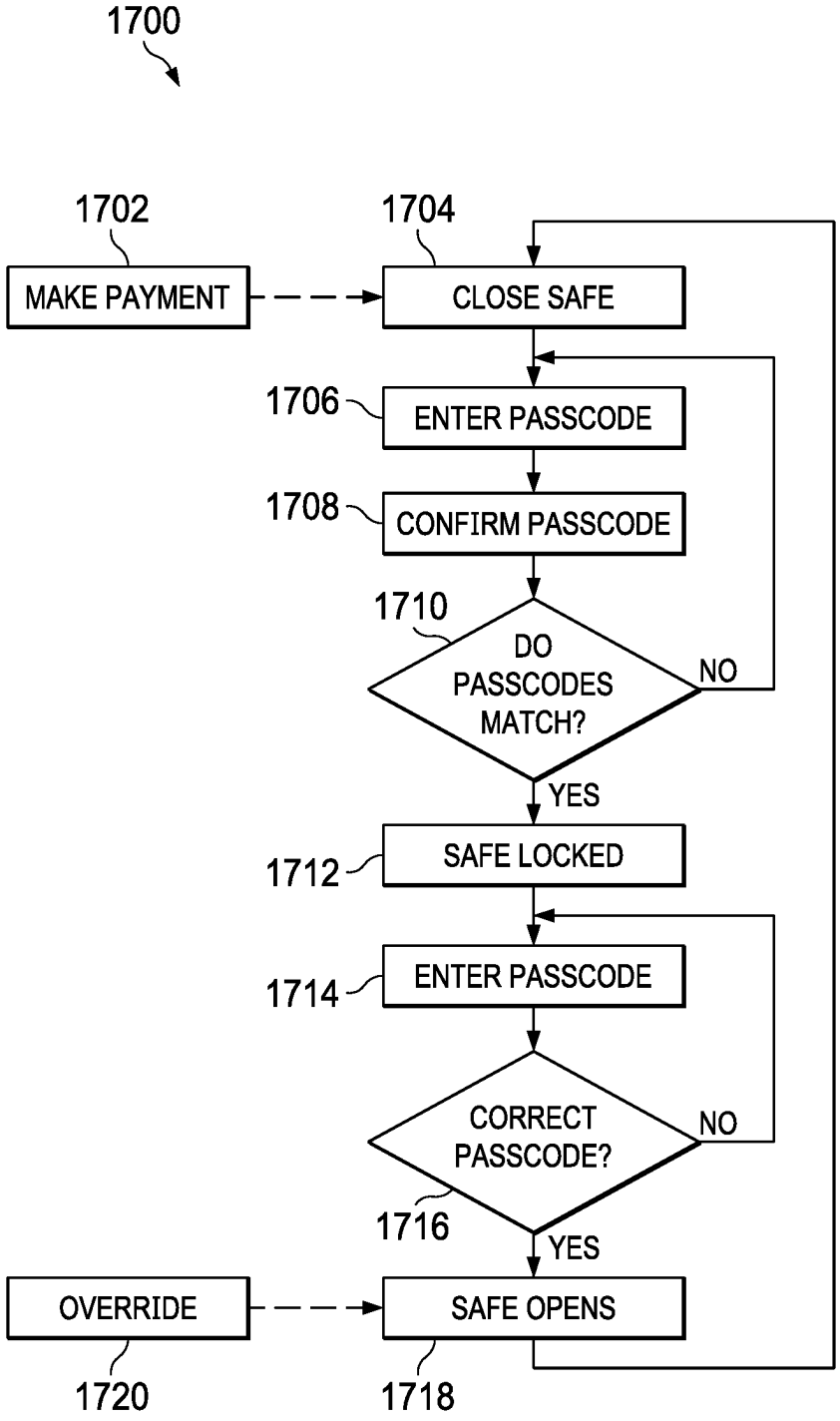
1700
1702
MAKE PAYMENT
1704
CLOSE SAFE
1706
ENTER PASSCODE
1708
CONFIRM PASSCODE
1710
DO PASSCODES MATCH?
NO
YES
1712
SAFE LOCKED
1714
ENTER PASSCODE
CORRECT PASSCODE?
NO
1716
YES
OVERRIDE
SAFE OPENS
1720
1718

FIG. 17

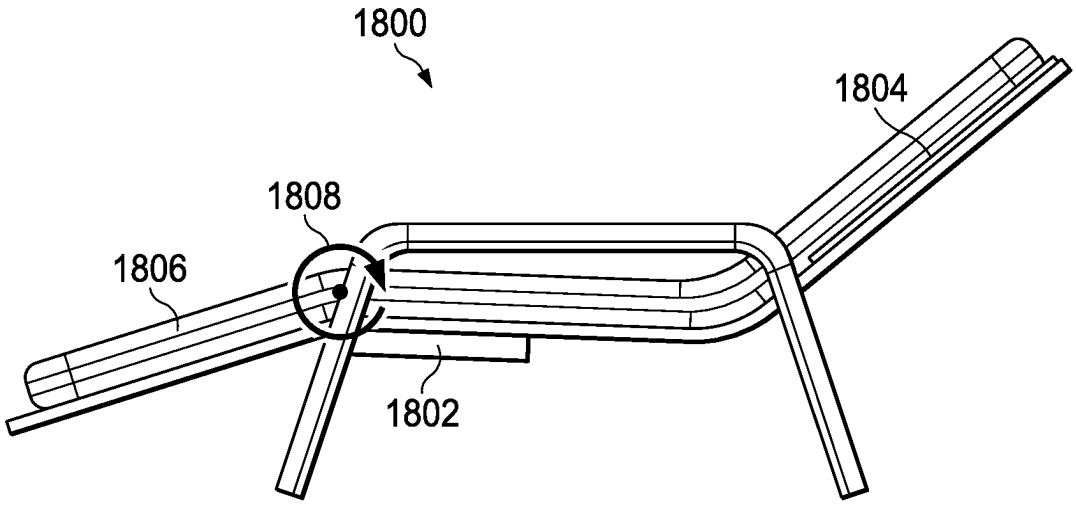

FIG. 18

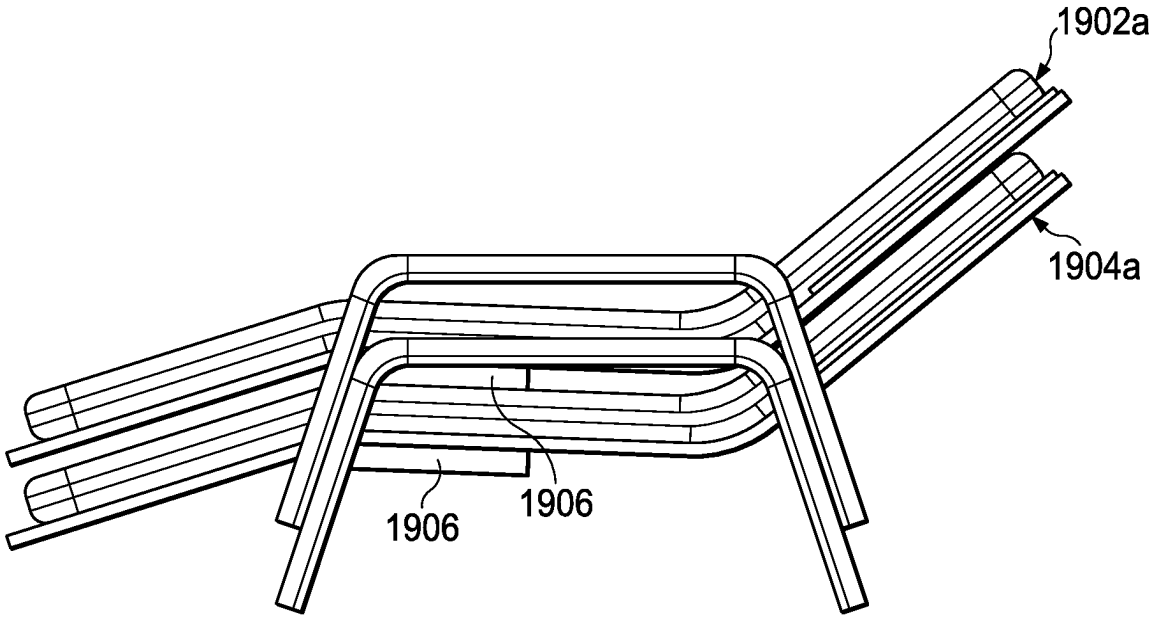

FIG. 19A

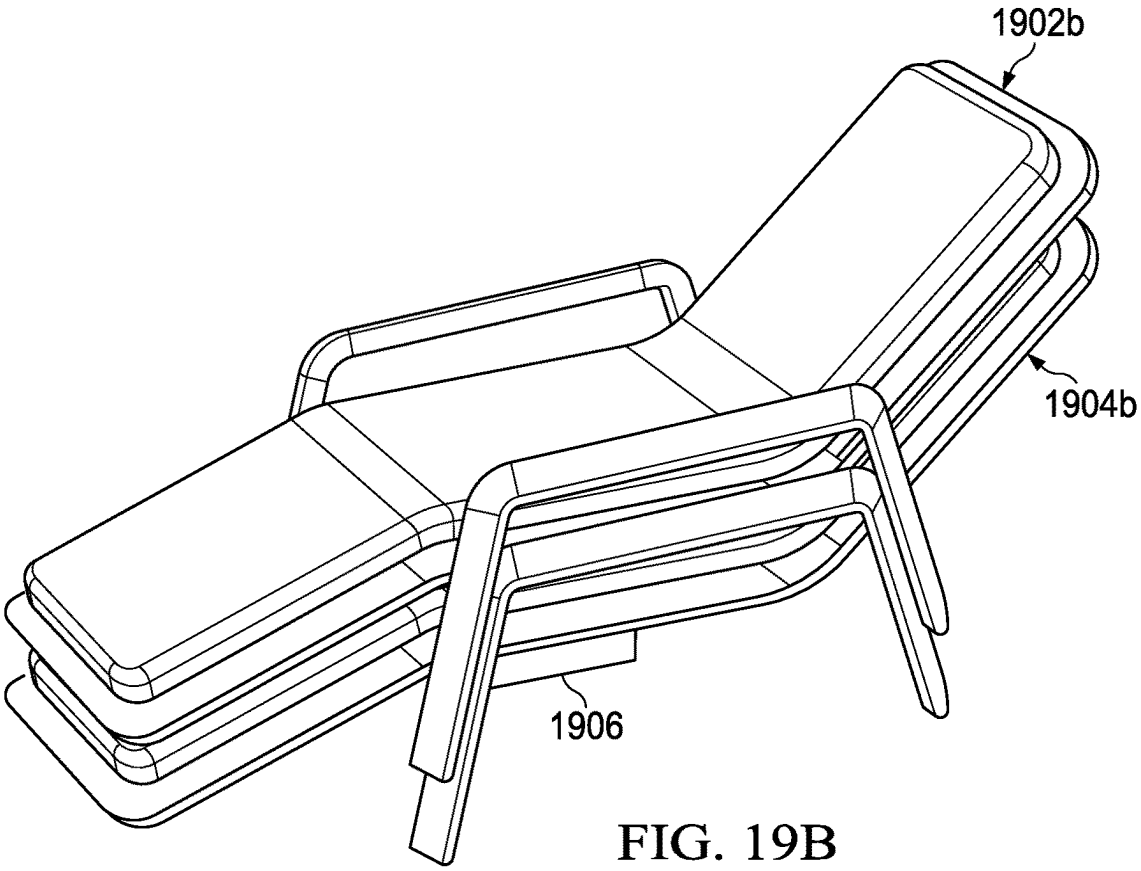

FIG. 19B

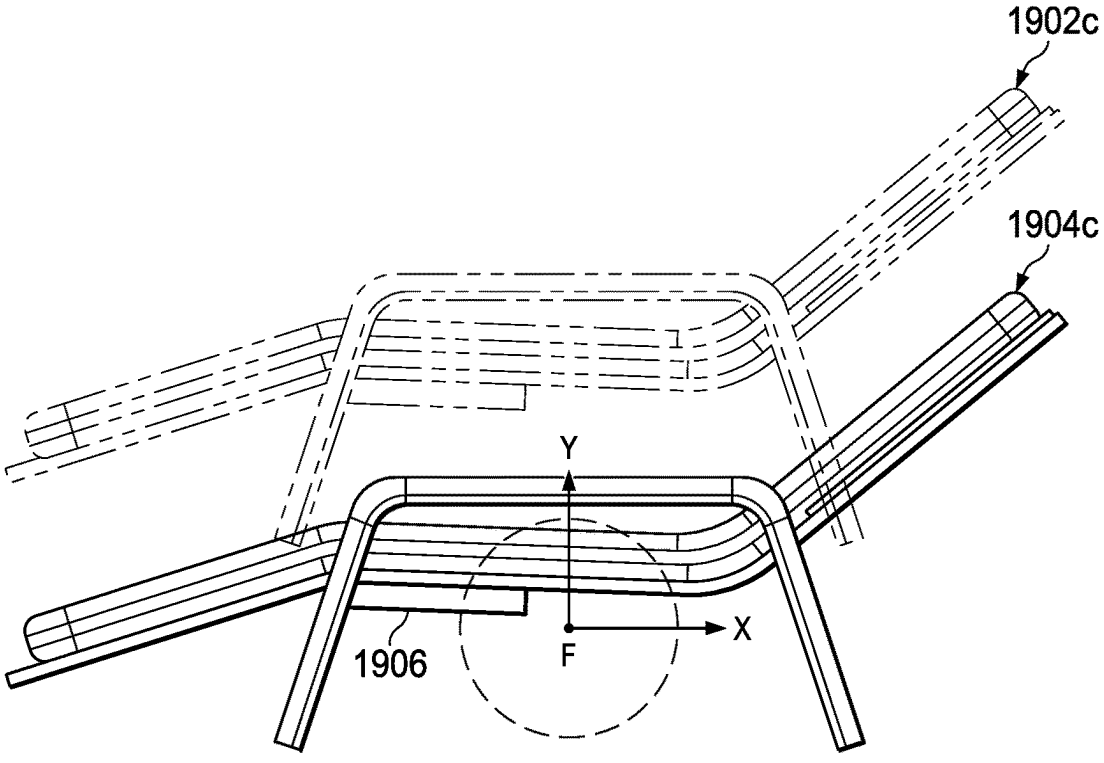

FIG. 19C

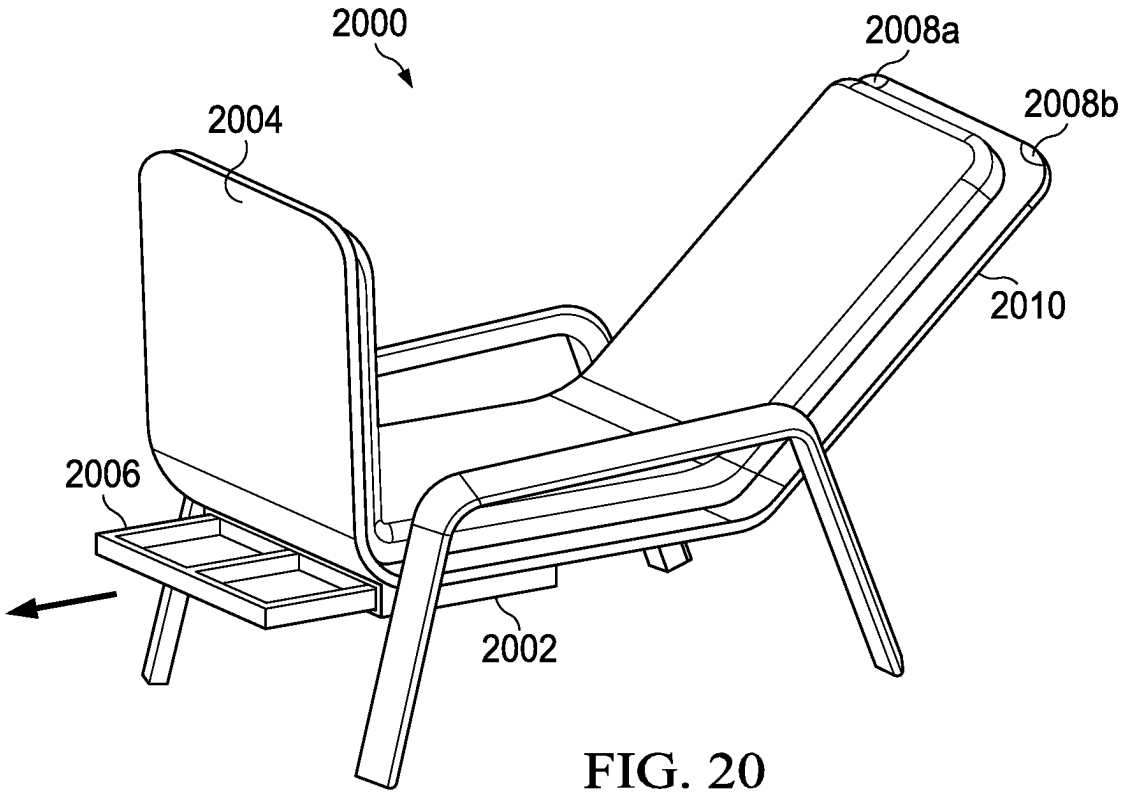
2000
2008a
2008b
2004
2010
2006
2002

FIG. 20

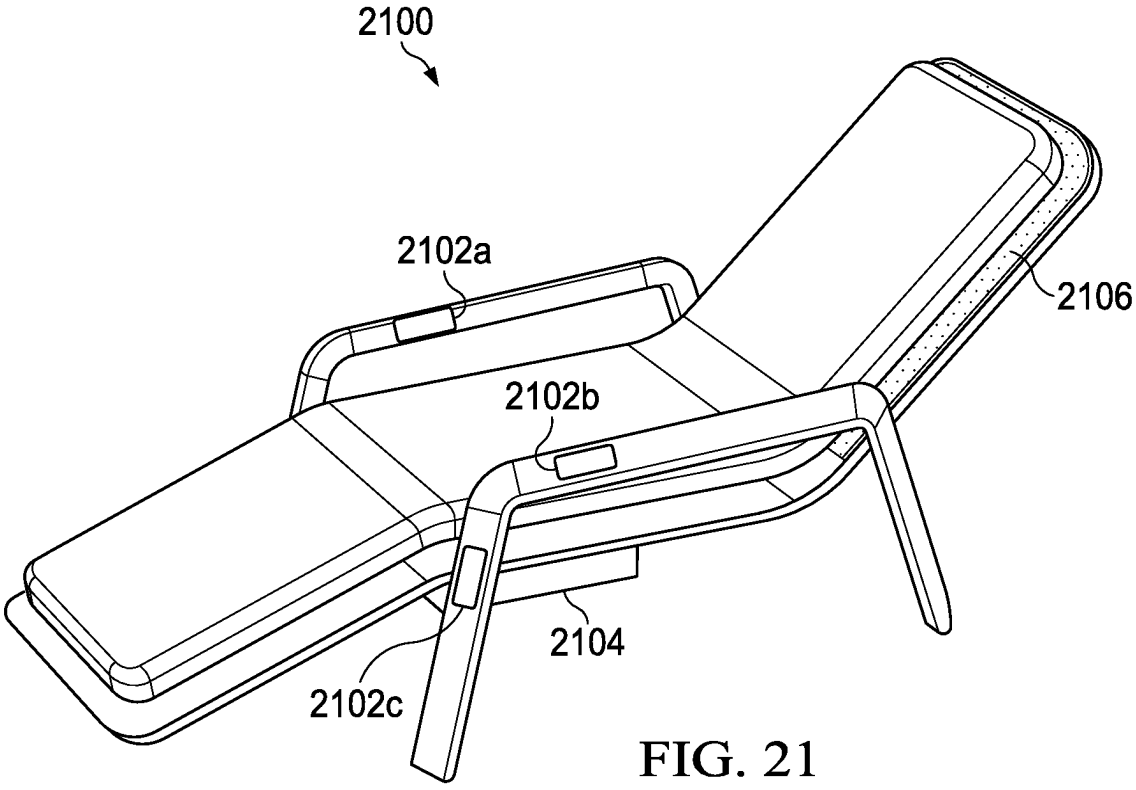
2100
2102a
2106
2102b
2104
2102c

FIG. 21

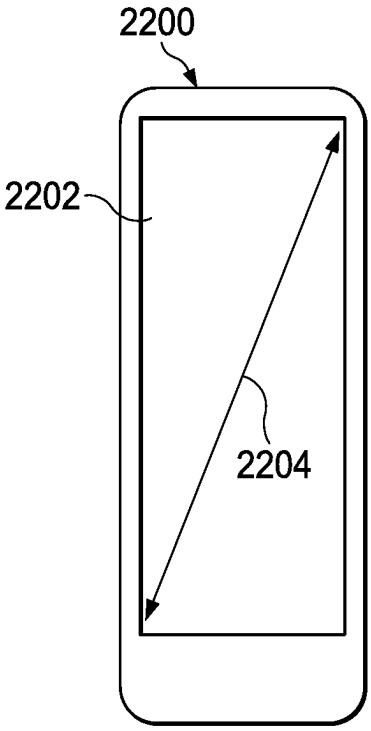

FIG. 22

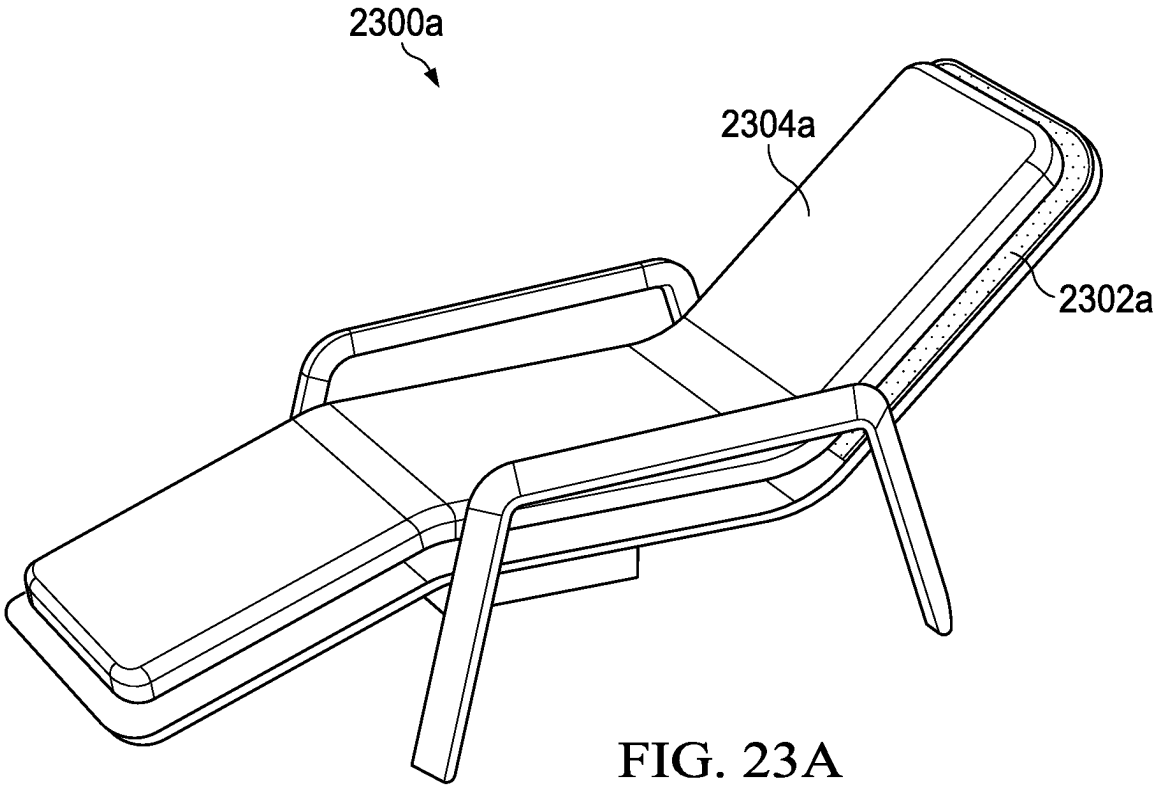

FIG. 23A

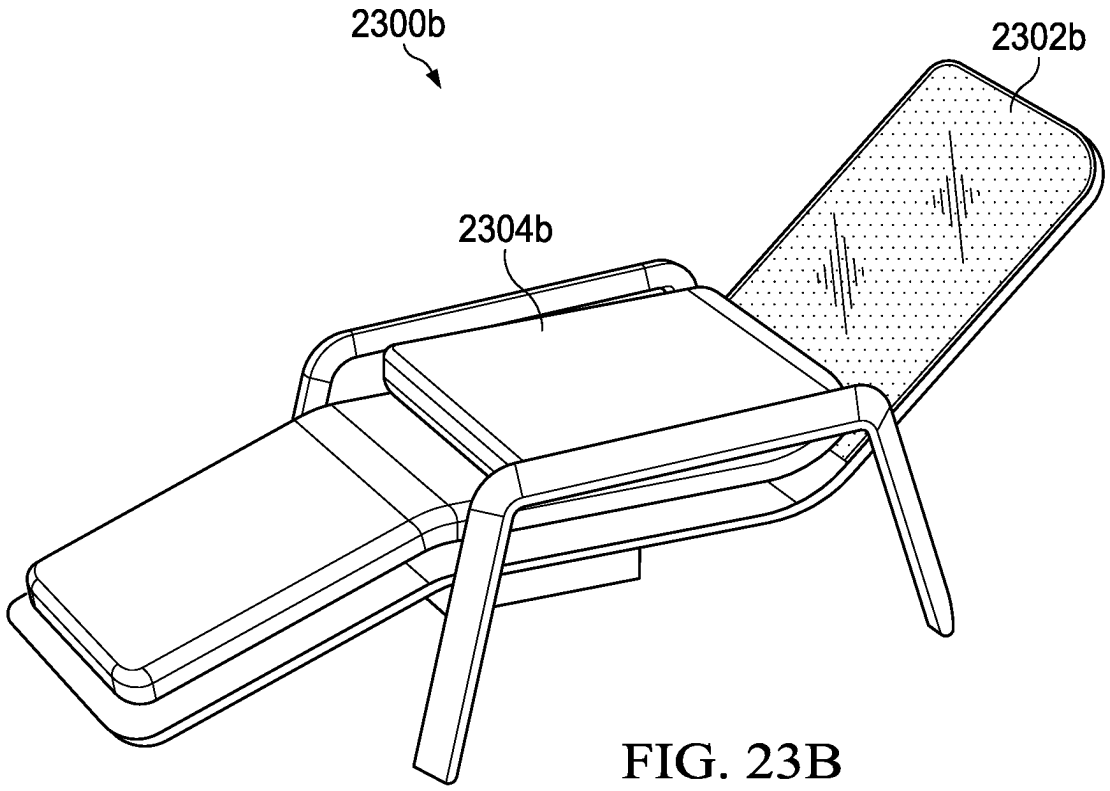

FIG. 23B

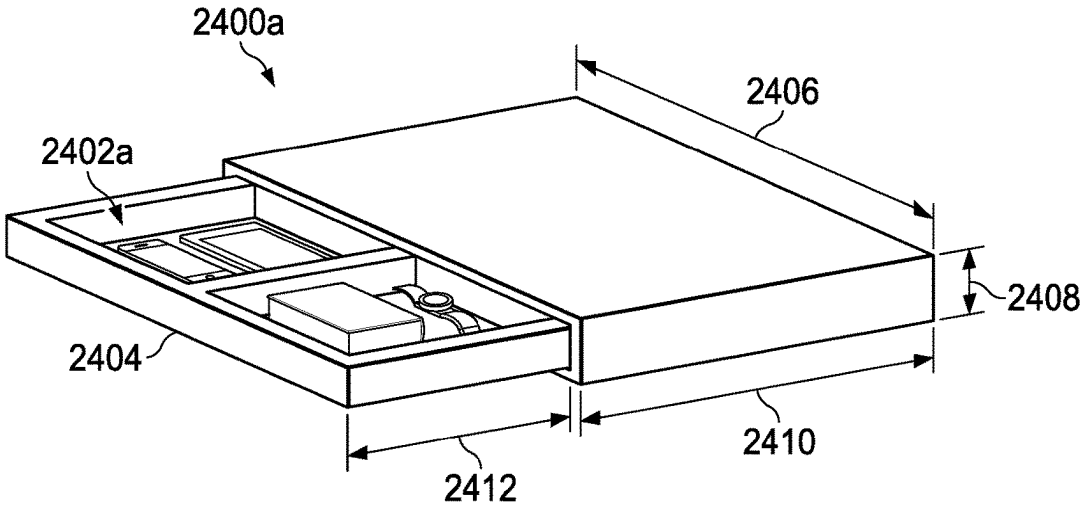

FIG. 24A

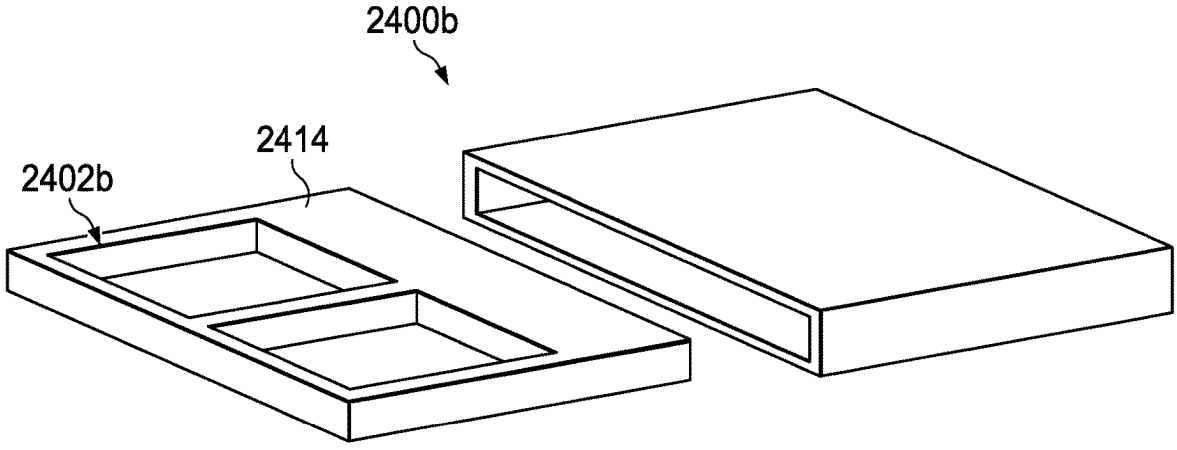

FIG. 24B

OUTDOOR CHAISE LOUNGE WITH INTEGRATED LOCK-BOX AND COMMUNICATIONS SYSTEM

CROSS REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. patent application Ser. No. 16/861,006 filed Apr. 28, 2020 and U.S. patent application Ser. No. 15/809,983 filed on Nov. 10, 2017, now U.S. Pat. No. 10,633,911, issued Apr. 28, 2020, the contents of which are hereby incorporated herein in their entirety.

FIELD OF THE INVENTION

The present invention relates to chaise lounges, and more specifically, to chaise lounges having a lock-box and communication system.

BACKGROUND

Attending pools and beaches is a favorite pastime for people around the globe. Pools, such as hotel pools, and beaches have become destination locations that often include snack bars or have food for purchase, items, such as inner-tubes, for rent or sale, or other items available for rent or purchase. To purchase or rent the food or items, people generally bring wallets and/or purses, to carry forms of payment, such as money, credit cards, or otherwise.

Mobile electronic devices, such as mobile phones, electronic games, and digital reading devices, have become prevalent throughout society. People take mobile electronic devices nearly everywhere, including pools and beaches, because mobile electronic devices provide safety, entertainment, communications, leisure reading, and other information and utility. While having valuables, such as forms of payment and mobile electronic devices, are beneficial to people at pools and beaches, it also provides an opportunity for theft by others when people leave the valuables unattended. Because of the fear of theft, people tend to leave one person with the valuables while others go swimming or elsewhere or limit their separation from the valuables (e.g., stay within eyesight of the valuables, concealing valuables with a towel or clothes, etc.) when enjoying themselves in the water, when playing on the beach, etc. As a result, the desired leisure experience tends to be limited as a result of the stress of having valuables stolen while at pools and beaches. In addition to potential theft, there is also a concern of damage to mobile devices (i) if sand or water enters the devices through a data power socket or otherwise or (ii) if the user simply drops the device on a pool deck.

SUMMARY

In order to minimize the chance of damage, loss, or theft of valuables, such as forms of payment, mobile electronic devices, or otherwise, the principles of the present invention provide for an outdoor chaise lounge that includes an integrated lock-box such that a user may lock his or her valuables in the lock-box to be secured therein. The lock-box may have a mechanical or electromechanical lock to enable a user to lock and unlock his or her valuables in the lock-box. If an electromechanical lock is used, the outdoor chaise lounge may include a photovoltaic device to convert light into electricity to charge a rechargeable battery used to power the electromechanical lock.

An outdoor chaise lounge including a lock-box integrated therein. The chaise lounge may have a photovoltaic device mounted to a portion of a seat member where a user rests his or her head, and the lock-box may be positioned below a foot portion of the seat member. The foot portion of the seat member may be configured to be rotated upwards to enable a user to access the lock-box. In an embodiment, electronic devices may be integrated into a member of the chaise lounge, such as a leg member, frame member, or armrest, and be configured to enable a user to order food, beverages, attendants, or perform other communications with a billing or other system of a venue (e.g., hotel, cruise ship, etc.) via a wireless communication.

BRIEF DESCRIPTION

The accompanying drawings, which are incorporated in and constitute a part of this specification, illustrate an implementation of the present invention and, together with the description, serve to explain the advantages and principles of the invention. In the drawings:

FIG. **1**A is an illustration of an illustrative outdoor chaise lounge that has an integrated lock-box positioned beneath a backrest of the outdoor chaise lounge in accordance with the principles of the present invention;

FIG. **1**B is an illustration of an illustrative RFID bracelet that may be utilized with the lock-box of FIG. **1** for unlocking an electronic lock of the lock-box;

FIGS. **2**A and **2**B are illustrations of an alternative illustrative outdoor chaise lounge that has an integrated lock-box that is positioned beneath a foot portion of the seat member of the outdoor chaise lounge;

FIGS. **3**A-**3**C are illustrations of yet another alternative illustrative outdoor chaise lounge that has an integrated lock-box that extends sideways from the outdoor chaise lounge;

FIG. **4** is an illustration of an illustrative outdoor chaise lounge that has integrated lock-boxes in an armrest and a leg at a foot region of the outdoor chaise lounge in accordance with the principles of the present invention;

FIG. **5** is an illustration of an illustrative network environment in which a mobile device may be configured to communicate with a safe or lock-box positioned at an outdoor chaise lounge to lock and/or unlock the lock-box;

FIG. **6** is a block diagram of illustrative circuitry for use in controlling and operating a lock-box positioned at an outdoor chaise lounge;

FIG. **7** is a flow diagram of an illustrative process for renting and operating a lock-box at an outdoor chaise lounge;

FIG. **8** is a block diagram of an illustrative network environment in which a user may rent a lock-box at an outdoor chaise lounge;

FIG. **9** is an illustration of an illustrative outdoor chaise lounge that has been retrofitted with a lock-box;

FIG. **10** is an illustration of a cutout view of an illustrative lock-box that is weather proof for use with outdoor chaise lounges;

FIG. **11** is an illustration of a rear view of an illustrative lock-box having a wire basket for use with outdoor chaise lounges;

FIG. **12** is an illustration of an illustrative lock-box configured with a hinged lid door;

FIG. **13** is an illustration of an illustrative lock-box configured with sliding lid door;

FIG. **14** is an illustration of an illustrative lock-box configured with a sliding drawer;

FIG. **15** is an illustration of illustrative outdoor chaise lounges, configured with one or more lock-boxes, in a stacked configuration;

FIGS. **16**A-**16**C are illustrations of an illustrative sliding lock-box in three different positions that may be integrated with an outdoor chaise lounge;

FIG. **17** is a flow diagram of an illustrative process for enabling a user to rent a lock-box configured with an outdoor chaise lounge;

FIG. **18** is an illustration of an illustrative outdoor chaise lounge inclusive of a lock-box;

FIGS. **19**A-**19**C are illustrations of an illustrative outdoor chaise lounge that is configured to stack on other outdoor chaise lounges;

FIG. **20** is an illustration of an illustrative outdoor chaise lounge inclusive of a lock-box;

FIG. **21** is an illustration of an illustrative outdoor chaise lounge inclusive of an electronic device configured to be in communication with a communications network of a venue;

FIG. **22** is an illustration of an illustrative electronic device configured to communicate with a communications network of a venue;

FIGS. **23**A and **23**B are illustrations of an illustrative outdoor chaise lounge inclusive of a photovoltaic device and a cushion disposed on the photovoltaic device; and

FIGS. **24**A and **24**B are illustrations of an illustrative lock-box inclusive of a slideable drawer.

DETAILED DESCRIPTION

With regard to FIG. **1**A, an illustration of an illustrative outdoor chaise lounge **100** that has an integrated lock-box **102** supported by a frame **103** and legs **104** of the outdoor chaise lounge **100** is shown. The outdoor chaise lounge **100** may include a seat member **106***a* and **106***b*, where seat member **106***b* may rotate upward to operate as a backrest **106***b*. In this embodiment, the integrated lock-box **102** is positioned beneath the backrest **106***b*. The lock-box **102** may include a door **108** with a user interface **110** that enables a user to access the lock-box **102**. The user interface **110** may have a wide range of configurations, including keypad, RFID scanner, wireless receiver, barcode reader, credit/debit card reader (e.g., magnetic strip reader), room key reader, electronic display, keyhole, or any other electromechanical or electronic interface that enables a user or device responsive to a user to communicate with the user interface **110** to lock and unlock the lock-box **102** so as to enable the user to add and remove personal items from the lock-box **102**. In an alternative embodiment, the lock-box **102** may utilize a mechanical key and lock mechanism, as understood in the art. The door **108** of the lock-box **102** may also include a handle **111** that is integral or integrated with the door **108** to allow for the user to open and close the door **108** of the lock-box **102**.

With regard to FIG. **1**B, an illustration of an illustrative RFID bracelet **118** that may be utilized with the lock-box **102** of FIG. **1** for unlocking an electronic lock (not shown) of the lock-box **102** is shown. The RFID bracelet **118** may include a band **120** that is flexible and size adjustable to accommodate for adults and children. The RFID bracelet **118** may have an integrated RFID tag **122** that may be fixedly programmed with a certain code so as to be limited to a single lock-box or be reprogrammable to enable an operator or user (e.g., renter) to change the code. In one embodiment, the RFID tag **122** may be disposable. Alternatively, the RFID tag **122** may be configured to be moved from one band to another, as the RFID tag **122** may be expensive, whereas the bands may be inexpensive or have different sizes. It should be understood that any form of RFID tag may be utilized in accordance with the principles of the present invention. However, because the outdoor chaise lounges are generally used around pools or beach, the use of a bracelet may provide more convenience and safety for users than other forms or carriers in which the RFID tags may be incorporated.

With regard to FIGS. **2**A and **2**B, illustrations of an alternative illustrative outdoor chaise lounge **200** that has an integrated lock-box **202** that is positioned beneath a foot region **204** of a seat member **206** of the outdoor chaise lounge **200** are shown. In this embodiment, the lock-box **202** may be positioned beneath a door **208**, such as a hinged door, that is integrated with the seat member **206** that enables the user to access the lock-box **202** through the seat member **206**. In one embodiment, the door **208** may be configured with a user interface (not shown), as described with regard to FIG. **1**A. Alternatively, the door **208** may be more of a protector cover for the lock-box **202** and be of the same or different material, such as wood or plastic, than that of the seat member **206**. If the door **208** functions as a cover, than another door (not shown) for the lock-box **202** may be position beneath the door **208** and include the user interface. It should be understood that the user interface need not be a physical "touch" user interface, such as a keypad, with which a user physically touches, but may be a wireless user interface that communicates locally with an RFID tag, near field communication (NFC) interface that communicates locally with a mobile device or other item, or otherwise (e.g., remote control receiver that receives lock and unlock commands with a remote control device with which the user may use).

By having the lock-box **202** positioned at the foot region **204** of the seat member **206**, in the event that the outdoor chaise lounge **200** is positioned in a tight spacing configuration with other outdoor chaise lounges, as is common at large, crowded pools and beaches, the user can access the lock-box **202** without having to walk around the outdoor chaise lounge **200** to raise a backrest member **212** of the seat member **206**, as is the case with outdoor chaise lounge **100** of FIG. **1**A. The lock-box **202** is shown to include a housing **214** that extends below the seat member **206** and be shorter than legs **210** of the outdoor chaise lounge **200**, thereby enabling the outdoor chaise lounge **200** to be stacked with other outdoor chaise lounges (see FIG. **15**).

With regard to FIGS. **3**A-**3**C, illustrations of yet another alternative illustrative outdoor chaise lounge **300** that has an integrated lock-box **302** that extends sideways from the outdoor chaise lounge **300** are shown. FIG. **3**A shows the lock-box **302** in a stowed position, and FIG. **3**B shows the lock-box **302** in an extended position. In the extended position, the lock-box **302** may provide a user with access to the lock-box **302**, as previously described, and also provide a user with a "table" or shelf (i.e., top surface or lid **304** of the lock-box **302**) on which drinks or other items may be placed. In one embodiment, sufficient hardware (e.g., slides) (not shown) may be provided to enable the lock-box **302** to be extended to either or both sides of the outdoor chaise lounge **302**. In one embodiment, multiple lock-boxes may be supported by the outdoor chaise lounge, thereby enabling the user to store items in each without having to extend a larger lock-box to one side (i.e., smaller lock-boxes may be slid out on each side and/or from the foot and/or head) of the outdoor chaise lounge. In the case of a larger lock-box, rather than the door covering the entire compartment, the door may be hinged half way over the chamber, so that a

portion, such as half, of the lock-box **302** may remain beneath the seat member to limit the extent that the lock-box **302** has to be extended from the outdoor chaise lounge. Having a hinged half-door may also allow a user to open the door without having to move items from the non-rotating portion of the door.

With regard to FIG. **3**C, a detailed view of the lock-box **302** of FIGS. **3**A and **3**B is shown. The lock-box **302** is shown to include a variety of different user interface items, including a keypad **306**, antenna(s) **308** for receiving wireless communications, credit card reader **310**, touch screen display **312**, and/or other user interface component(s), such as status indicator(s) **314**. In one embodiment, a coin and/or bill reader (not shown) may be included at the outdoor chaise lounge **300** to rent the lock-box **302**. The lid or door **304** may be pivotally configured with the lock-box **302**, and be inclusive of a seal **315** either on the door or along an interface with which the door **304** contacts when closed to prevent water from entering a compartment of the lock-box **302**. Moreover, the compartment may be sub-divided with divider(s) **316** and be padded with a soft material (e.g., felt) to limit damaging items that are stored therein. Outlets, charging ports, input/output (I/O) ports or other ports **318** that a user may desire to use to charge or access content via a network, such as the Internet, may be provided within the lock-box **302**.

A variety of different configurations to provide the user with access to the various ports, such as through a front or side internal or external wall of the lock-box **302** may be provided in accordance with the principles of the present invention. Such access to the ports **318** may be restricted to a user who rents the lock-box **302** or any user of the outdoor chaise lounge **300**. A master key slot **320** may provide for an operator to override any electronic control of the lock-box **302**. A master passcode or PIN may also be available to an operator to access the lock-box **302**. The lock-box **302** may also have an identifier, serial number, other printed indicia **322** to allow a user and operator to know which lock-box is positioned on an outdoor chaise lounge **300**. In one embodiment, a solar panel **324** positioned on a front face **326** of the lock-box **302**. Mounting hardware **328** that enables the lock-box **302** to slide in and out from beneath a seat portion (chair deck and rails) **330** may be utilized.

With regard to FIG. **4**, an illustration of an illustrative outdoor chaise lounge **400** that has integrated lock-boxes **402** and **404** respectively positioned in an armrest **406** and leg **408** at a foot region of the outdoor chaise lounge **400** in accordance with the principles of the present invention is shown. A lock-box **410** may also be positioned beneath a headrest **412** of the outdoor chaise lounge **400**. It should be understood that multiple lock-boxes are optional and that more than two lock-boxes may be integrated with the outdoor chaise lounge **400**. As further shown, a solar panel **414** may be positioned along a top portion of the back rest **412** of the outdoor chaise lounge **400** and integrated therein. The solar panel **414** may alternatively be retrofitted onto an existing outdoor chaise lounge. Because the lock-box(es) **402**, **404**, and **410** may use electricity for powering electronics configured to provide for functionality (e.g., lock and unlock), the solar panel **414** may be used to power and/or recharge one or more rechargeable batteries (not shown) mounted to or integrated with the outdoor chaise lounge **400** or lock-box(es) **402**, **404**, and/or **410**. And, because the outdoor chaise lounge **400** has the availability of electricity, additional features may be provided with the outdoor chaise lounge **400**, including:

(i) a pager interface (not shown) for notifying an attendant to visit the user at the outdoor chaise lounge;
(ii) an alarm (not shown) to alert a lifeguard or attendant of an incident, such as a drowning victim;
(iii) a fan (not shown) for cooling down a person;
(iv) a mister (not shown) for use in providing water mist to the user;
(v) a charger (not shown) for charging a mobile device, such as a mobile telephone, which may be inside the lock-box;
(vi) a media device (not shown), such as a radio, television, CD player, electronic display, speakers with Bluetooth® interface (all not shown);
(vii) a display (not shown) that provides for status of lock-box **402**, enables a user to create a personal identification number (PIN) or passcode, input a passcode, open lock of the lock-box, or otherwise (e.g., usage status of the outdoor chaise lounge **400**);
(viii) a light (not shown) positioned on the outdoor chaise lounge **400** or extending vertically from the outdoor chaise lounge **400** on an extension arm (not shown) to notify an attendant that attention is desired; or
(ix) any other device that may use electricity that is capable of being powered by a rechargeable battery by the solar panel **414**.

It should be understood that the solar panel **414** may be configured in a variety of ways with the outdoor chaise lounge **400** or that an external solar panel that is not integrated with the outdoor chaise lounge **400** (e.g., integrated with a nearby table or umbrella) may be plugged into an outlet (not shown) on the outdoor chaise lounge **400** for recharging a rechargeable battery (not shown) that is integrated with the lock-box **402** or outdoor chaise lounge **400**.

With regard to FIG. **5**, an illustration of an illustrative network environment **500** in which a mobile device **502** may be configured to wirelessly communicate via a communications network **504***a* and/or **504***b* (e.g., mobile communications network, WiFi, NFC, Bluetooth, Infrared, local area network (LAN), wide area network (WAN), or otherwise) with a safe or lock-box **506** positioned at an outdoor chaise lounge, such as outdoor chaise lounge **300** of FIG. **3**, to lock and/or unlock the lock-box **506** is shown. It should be understood that a variety of different mechanisms, techniques, and communications protocols, for communicating with a user interface and/or looking mechanism of a lock-box are contemplated.

With regard to FIG. **6**, a block diagram of illustrative circuitry **600** for use in controlling and operating a lock-box positioned at an outdoor chaise lounge is provided. The circuitry **600** may be formed of multiple modules, including master control unit **602**, I/O circuitry **604**, electronic display **606**, antenna(s) **608** for communicating over one or more different frequency bands and using one or more different communications protocols, locking mechanism **610**, battery and/or rechargeable battery **612**, power management module **614**, solar panel(s) **616**, keypad **618**, alarm (e.g., speaker) **620**, and so on. The master control unit **602** may execute software to manage operations of the circuitry for communicating with and operating the locking mechanism **610** to control access to a compartment **622** of the lock-box. Power and databus outlets (not shown) may also be provided by the circuitry **600**. An override mechanism **624** that may be electrical (e.g., circuitry and/or software) or mechanical (e.g., physical key/lock) that may be used as a master override may be utilized to open the lock mechanism **610**.

With regard to FIG. **7**, a flow diagram of an illustrative process **700** for using an app on a mobile device for renting

and operating a lock-box at an outdoor chaise lounge is shown. The process **700** may start at step **702** for loading an app on a mobile device or accessing a website. Payment/authorization may be received from the app or website to enable a lock-box to be rented at step **704**. In one embodiment, an identifier of the particular lock-box may be given. The identifier may be associated with a particular network address that is unique to a lock-box, thereby enabling remotely controlling the lock-box via a communications network. A token, password, key, or other identifier may be generated by a computing device or received from the user, or simply communicated to the lock-box at step **706**. At step **708**, to unlock the lock-box, the user may enter a passcode or PIN (supplied by the user via the app or website) into a user interface. Alternatively, the lock-box may be controlled remotely via a remote server or other communications device or system, such as a kiosk or operator station. At step **710**, a time duration (e.g., 4 hours) for rental or use of the lock-box may be monitored and, if time runs out, then the process may restart at step **702**. Otherwise, the user may continue to access (i.e., lock and unlock) the lock-box. The user may also actively terminate using the lock-box, and the process **700** is restarted in response thereto. An information management system managed and/or operated by an operator or owner of the outdoor chaise lounges may be utilized to store information being used to control and operate the lock-boxes associated with the outdoor chaise lounges.

With regard to FIG. **8**, a block diagram of an illustrative network environment in which a user may rent a lock-box at an outdoor chaise lounge from among multiple outdoor chaise lounges **802***a*-**802***c* (collectively **802**) is shown. In the network environment **800** shown, a local area network **804** may be utilized. The local area network **804** may be a WiFi network or any other LAN configuration or protocol, as understood in the art, where each of the outdoor chaise lounges with lock-boxes may have a different network address, as understood in the art. An access point **806**, server **808**, and other network devices may be provided to support communications to and from the lock-boxes. If the outdoor chaise lounges **802** are at a hotel, resort, cruise ship, or otherwise, then the user may access the lock-boxes via a hospitality management system via a hotel television system, telephone system, intranet, or any other system offered by the hotel, resort, cruise ship, or otherwise. The access point **808** may be a kiosk, vending machine, web portal, smartphone app, and/or hospitality management system.

With regard to FIG. **9**, an illustration of an illustrative outdoor chaise lounge **900** that has been retrofitted with a lock-box **902** is shown. In this embodiment, a lock-box may be retrofitted into an existing outdoor chaise lounge by adding brackets **904** that support the lock-box. In addition to the brackets **904**, other hardware, such as sliders **906**, hinges (not shown), and/or other members (e.g., fastening members) may be used to support the lock-box **902**. By retrofitting the lock-box **902** onto an existing outdoor chaise lounge **900**, an owner of outdoor chaise lounges may simply purchase, rent, or otherwise acquire the lock-boxes and supporting communications equipment without having to purchase new outdoor chaise lounges or have an operator of the lock-boxes have to provide new outdoor chaise lounges in the case where the operator of the lock-boxes offers new outdoor chaise lounges with integrated lock-boxes with a revenue sharing arrangement, for example. In retrofitting the outdoor chaise lounge **900**, fastening members that are atypical, non-standard, or configured in a manner (e.g., overlapping retrofitting elements) to be difficult to remove may be utilized to reduce the potential for the lock-boxes to be removed by someone other than authorized personnel. To further secure a lock-box, such as lock-box **114** (FIG. **1**) or lock-box **902**, to an outdoor chaise lounge, such as outdoor chaise lounges **100** (FIG. **1**) and **900**, the lock-box may be fixedly attached to a frame member of a frame, such as frame **103** (FIG. **1**). In one embodiment, the frame may be formed of multiple frame elements. One or more brackets (e.g., brackets **904**) may be configured to be connected between the multiple frame elements, thereby fixedly securing the lock-box **902** to the frame and preventing the lock-box from being removed from the frame without separating the multiple frame members. Additionally and/or alternatively, a bracket may be configured to mount the lock-box to the frame, and fastening members may be configured to fixedly secure the lock-box to the frame. A cover member may be configured to prevent direct access to the fastening members, where the cover member includes at least one cover fastening member being different from the fastening members.

With regard to FIG. **10**, an illustration of a cutout view of an illustrative lock-box **1000** that is weather proof for use with an outdoor chaise lounge **1001** is shown. A locking mechanism **1002** may be included, where an elastomeric seal **1004** surrounding a region at which a lid or door of the lock-box **1000** may be included to protect a compartment **1006** of the lock-box **1000** in which items may be stored.

With regard to FIG. **11**, an illustration of a rear view of an illustrative lock-box **1100** having a wire basket **1102** for use with an outdoor chaise lounge **1104** is shown. The use of the wire basket **1102** is not weather proof, but simply provides for a secured holder of personal items. In one embodiment, a cover may be formed of a solid material, such as plastic or wood, that prevents rain and sun from directly entering the wire basket. Because the cover will be subjected to sunlight and weather conditions, the cover may be formed of a material that is capable of surviving long periods of time in sunlight and can withstand wide temperature and moisture conditions for longer use without having to be replaced.

With regard to FIG. **12**, an illustration of an illustrative lock-box **1200** configured with a hinged lid door **1202** is shown. Such a configuration may be used with certain configurations and positions of lock-boxes, such as those described hereinabove. In one embodiment, the door **1202** may be biased to a closed position using a spring (not shown) or other design mechanism, so that the door will close automatically unless being physically held open by a user, thereby reducing the chance that rain or other water will enter the compartment. Other covers or enclosure mechanisms may use the same or similar close-position bias design function.

With regard to FIG. **13**, an illustration of an illustrative lock-box **1300** configured with a sliding lid door **1302** is shown. The use of the sliding door **1302** enables the lock-box **1300** not to be fully slid out from beneath an outdoor chaise lounge to access a compartment of the lock-box.

With regard to FIG. **14**, an illustration of an illustrative lock-box **1400** configured with a sliding drawer **1402** is shown. The sliding drawer **1402** may be used to reduce the amount of hardware that would otherwise have to support movement of the entire lock-box **1400**.

With regard to FIG. **15**, an illustration of illustrative outdoor chaise lounges **1500**, configured with one or more lock-boxes **1502**, in a stacked configuration is shown. Because of the configurations and positions of the various lock-boxes or safes **1502**, the outdoor chaise lounges are able to be stacked as is normally done. In one embodiment, the lock-boxes **1502** may be centrally positioned with

respect to the outdoor chaise lounges (i.e., centered horizontally and longitudinally), thereby making moving and lifting the outdoor chaise lounges more balanced for attendants and users of the outdoor chaise lounges.

With regard to FIGS. **16**A-**16**C, illustrations of an illustrative sliding lock-box **1600** in three different positions that may be integrated with an outdoor chaise lounge are shown. In FIG. **16**A, the lock-box **1600** is stowed under a seat member **1602** and chair rail or frame **1604** of the outdoor chaise lounge. In FIG. **16**B, the lock-box is extended from beneath the seat member **1602**, thereby providing for a "table" or shelf **1606** on which a user may place items. In FIG. **16**C, a lock-box compartment **1608** may be further extended from beneath the table **1606** portion or cover of the lock-box **1600**, thereby enabling a user to access the contents of the lock-box **1600** without having to alter the table **1606**. In one embodiment, the lock-box **1600** may be slid out from beneath the seat member **1602** whether or not the user has rented or is using the compartment **1608** to provide the user with convenience of the table **1606**. This configuration may also be considered a two-stage drawer.

With regard to FIG. **17**, a flow diagram of an illustrative process **1700** for enabling a user to rent a lock-box configured with an outdoor chaise lounge is shown. The process **1700** may include making a payment at step **1702**. The safe or lock-box may be in a closed position at step **1704**, and a passcode or PIN may be created or received at step **1706**. At the lock-box or via a remote system, the user may enter a passcode to cause the lock-box to lock. In the event that the user is provided with an RFID bracelet (see FIG. **1**B), then the user may place the RFID tag of the bracelet near the lock-box to cause the lock-box to lock. The lock-box or remote system may confirm a passcode provided to the lock-box at step **1708**. If the passcode matches at step **1710**, the lock-box may be locked at step **1712**, otherwise the process may reform to step **1706**. To unlock the lock-box, the passcode may be reentered into and received by the lock-box by a user at step **1714**. It should be understood that the lock-box may be configured to remain unlocked unless a valid passcode is entered, as determined at step **1716**, where the lock-box may be opened at step **1718**. In other words, the lock-box may be normally unlock unless controlled by a user to cause the lock-box to lock, thereby reducing the chance that something will unintentionally be locked in the lock-box by someone who does not know the passcode. At step **1720**, an override process, such as using a physical key, may be used to unlock and open the lock-box.

With regard to FIG. **18**, an illustration of an illustrative outdoor chaise lounge **1800** inclusive of a lock-box **1802** is shown. The outdoor chaise lounge **1800** may also include a photovoltaic device **1804**, a cushion **1806**, and at least one hinge **1808** configured to rotatably position a portion of the outdoor chaise lounge **1800** and the cushion **1806**.

In one embodiment, the lock-box **1802** may be about two-inches thick. Other thicknesses are possible depending on the configuration of the outdoor chaise lounge **1800** to which the lock-box **1802** is engaged. The lock-box may **1802** may include a drawer inclusive of a wireless charger for an electronic device such that when the electronic device is placed in the drawer, the electronic device may be charged. In one embodiment, the cushion **1806** may be approximately 3 inches thick. One of skill in the art will appreciate that a variety of thicknesses for the lock-box **1802** and the cushion **1806** are considered. The hinge **1808** may be configured to rotate the portion of the outdoor chaise lounge **1800** and the cushion **1806** such that the lock-box **1802** may be accessible.

With regard to FIGS. **19**A-**19**C, illustrations of illustrative outdoor chaise lounges **1902***a*-**1902***c* (collectively **1902**) that are configured to stack on other outdoor chaise lounges **1904***a*-**1904***c* (collectively **1904**) are shown. A profile of lock boxes **1906** are such that the outdoor chaise lounges **1902** are able to be stacked on outdoor chaise lounges **1904** without touching or touching, but not damaging or otherwise impacting the ability to stack the outdoor chaise lounges **1902** and **1904**.

With regard to FIG. **20**, an illustration of an illustrative outdoor chaise lounge **2000** inclusive of a lock-box **2002** is shown. In one embodiment, a bottom or foot portion **2004** of the outdoor chaise lounge **2000** may be rotatably connected such that the bottom portion **2004** may be rotated upwards to allow a user access to the lock-box **2002**. A hinge (not shown) to which the bottom portion **2004** attaches may be configured to enable the bottom portion **2004** to remain in an upright position. Alternatively, the bottom portion **2004** may be rotated upwards and may be configured with one or more stop mechanisms (e.g., bar, pins, brace, etc.) that enables the bottom portion **2004** to be positioned in an upwards position (e.g., 30 degrees to 180 degrees) to allow for the user to access the lock-box **2002**. The user may open a drawer **2006** of the lock-box **2002** to secure personal items inside the lock-box **2002**. After closing the drawer **2006**, the bottom portion **2004** may be rotated down to allow the user to access the outdoor chaise lounge **2000**. In an embodiment, a safety mechanism may be provided that prevents the bottom portion from pressing against the drawer when extended outwards.

In one embodiment, magnets, clips, hooks, loops and hooks material, or other fastening members may be disposed on a top portion **2010** of the chaise lounge **2000** that a user may use to attach or otherwise prevent a towel with complimentary member(s) (e.g., magnets, eyes, pockets, etc.) from sliding or falling down from the top portion **2010** of the chaise lounge **2000**.

With regard to FIG. **21**, an illustration of an illustrative outdoor chaise lounge **2100** inclusive of positions in which electronic device(s) **2102***a*-**2102***c* (collectively **2102**) configured to be in communication with a communications network of a venue is shown. The outdoor chaise lounge **2100** may also include a lock-box **2104** and a photovoltaic device **2106**.

In on embodiment, the electronic device **2102** may disposed in at least one of a frame and at least one leg coupled to the frame. The electronic device **2102** may be configured to be electrically coupled to an electronic connector, either wired or wireless, disposed in at least one of the frame and leg(s) coupled to the frame. One of skill in the art will appreciate that any of the frame and the legs may be configured to include electronic connectors configured to be electrically coupled to the electronic device **2102**. Electrical conductors may be attached to or extend through the frame and/or legs to provide for electrical power and/or signaling to the connectors. The electronic device **2102** may include an electronic paper display, generally known as e-ink. In one embodiment, the electronic paper display may include an approximately 6-inch diagonal screen size. Other dimensions are possible. The frame, leg, or armrest (depending on the location and configuration of the chaise lounge or chair) (individually considered a structural member of the chaise lounge) may be indented to accommodate the electronic device **2102** so that the device **2102** is flush with a top

surface of the member to which the device **2102** is secured or otherwise positioned. In an embodiment, a flap or cover (not shown) that is rotatably or otherwise connected to the member may be used to protect the device **2102** from being exposed to the environment (e.g., sun, rain, children, etc.). In one embodiment, the electronic device **2102** may be configured to communicate with another electronic communications device attached to the outdoor chaise lounge **2100**. The wireless device of the outdoor chaise lounge **2100** may be configured to communicate signals from the electronic device **2102** to a communications network of a venue. In one embodiment, the electronic device **2102** may be configured to communicate with the communications network of the venue directly or indirectly.

The electronic device **2102** may be configured to communicate signals indicative of food and/or drink orders, a request for a venue server, and a number of other messages the user may communicate to the venue (e.g., chair number, general position of the chair, image of a user of the chair, or any other information). One of skill in the art will appreciate that a number of messages may be communicated from the user to the venue. Any variety of communications protocols, such as WiFi®, Bluetooth®, or otherwise may be utilized. In one embodiment, the electronic device **2102** may be configured to have a low power sleep mode when the user is not active. In one embodiment, the electronic connector may include a inductive, wireless, or other connector that enables charging of the electronic device **2102**. One illustrative connector is a MagiSnap™ connector.

In one embodiment, the lock-box **2104** may include a battery, such as a 6,000 mAH Lithium Ion Battery. Any other sized battery may be utilized. The battery may be rechargeable, as previously described, through use of a photovoltaic or other device (e.g., wireless charger). The lock-box **2104** may be configured with a circuit to prevent over and/or under charging. In one embodiment, the lock-box **2104** may be further configured to prevent overheating. In one embodiment, the photovoltaic device **2106** may include an approximately 60 square inch photovoltaic panel.

In one embodiment, the outdoor chaise lounge **2100** may include a battery for the electronic device **2102**, such as a 1,000 mAH battery. In one embodiment, the battery for the electronic device **2102** may be housed in the lock-box **2104**. In one embodiment, the lock-box **2104** may include an additional battery, such as a 500 mAH battery for powering the lock-box **2104**. The lock-box **2104** may also include a wireless charger for charging electronic devices and at least one USB port, such as a USB type A port. The outdoor chaise lounge **2100** may also include electrical conductors in at least one of the frame and leg(s) of the plurality of legs. The electrical conductors may be electrically coupled to the electronic connectors.

With regard to FIG. **22**, an illustration of an illustrative electronic device **2200** configured to communicate with a communications network of a venue is shown. The electronic device **2200** may include an electronic paper display **2202**. In one embodiment, the electronic paper display **2202** may include an approximately 6-inch diagonal screen size **2204**.

The electronic device **2200** may be configured to enable a user to order food and/or drinks, manage a chaise lounge (e.g., cause a light to be illuminated to notify other users that the chaise lounge is occupied, notify a hotel operator of the location of the user, etc.), communicate a message to venue security, communicate remaining battery to a user, communicate a message to an attendant of the venue, and end a user session of a chaise lounge associated with the electronic device **2200**.

In one embodiment, the electronic paper display may include an E-Ink 6-inch screen. In one embodiment, the electronic device **2200** may be configured to communicate to Micros Hotel Software. The display of the electronic device **2202** may be a touch-enabled display.

With regard to FIGS. **23**A and **23**B, illustrations of an illustrative outdoor chaise lounge **2300***a*, **2300***b* (collectively **2300**) inclusive of a photovoltaic device **2302***a*, **2302***b* (collectively **2302**) and a cushion **2304***a*, **2304***b* (collectively **2304**) disposed on the photovoltaic device **2303** are shown. In one embodiment, the outdoor chaise lounge **2300***a* may represent an occupied chair. The outdoor chaise lounge **2300***a* may include the cushion **2304***a* in an up position. The up position may be configured to allow for a trickle charge from the photovoltaic device **2302***a* to electronic devices disposed in and/or in electrical communication with the outdoor chaise lounge **2300***a*.

In one embodiment, the outdoor chaise lounge **2300***b* may represent an unoccupied chair. The outdoor chaise lounge **2300***b* may include the cushion **2304***b* in a down position. The down position may expose a substantially large portion of the photovoltaic device **2302***b* such that fast charging of electronic devices disposed in and/or in electrical communication with a lock-box of the outdoor chaise lounge **2300***b* is enabled.

In one embodiment, an actuator, such as a powered motor or other electromechanical, hydraulic, or pneumatic mechanism (e.g., piston shaft), may be configured to automatically rotate the top or head portion of the chair to cause the cushion **2304***b* to fold down, thereby exposing the entirety of the photovoltaic device **2302***b*. In an embodiment, a sensor, such as a pressure or weight sensor, may be disposed on a seat or leg portion, thereby sensing whether the chair is currently occupied, and enabling a driver of the powered motor or other mechanism. In an embodiment, the automatic sensing may determine whether the battery has a low charge prior to automatically rotating the top portion of the seat, thereby preventing the top portion from constantly automatically rotating.

With regard to FIGS. **24**A and **24**B, illustrations of an illustrative lock-box **2400***a*, **2400***b* (collectively **2400**) inclusive of a slideable drawer **2402***a*, **2402***b* (collectively **2402**) are shown. The drawer **2402** may include a wireless charging pad **2404** for wirelessly charging electronic devices. The pad **2404** may be conductive or use any other wireless charging technology, as understood in the art.

In one embodiment, the lock-box **2400** may include a width **2406** of approximately 18 inches, a height **2408** of approximately two-inches, and a depth **2410** of approximately 12.5 inches. In one embodiment, the drawer **2402** may include a depth **2412** of approximately 9 inches. One of skill in the art will appreciate that a number of dimensions and/or combinations of dimensions will operate substantially similar as the dimensions described herein. In one embodiment, batteries and/or other electronic components may be housed in a rear portion **2414** of the drawer **2402**.

Although the lock-boxes described herein have been applied to an outdoor chaise lounge, it should be understood that the lock-box may be applied to other items or fixtures in accordance with the principles of the present invention. For example, tables, chairs, and other devices may also have lock-boxes applied thereto for rental or otherwise.

The previous description is of a preferred embodiment for implementing the invention, and the scope of the invention

should not necessarily be limited by this description. The scope of the present invention is instead defined by the following claims.

What is claimed:

1. An outdoor chaise lounge, comprising:

a photovoltaic device;

a rechargeable battery in electrical communication with the photovoltaic device;

a frame;

a plurality of legs coupled to the frame;

a seat member coupled to the frame;

a sensor configured to sense if a user is on the chaise lounge;

an actuator configured to rotatably move a first portion of a cushion relative to a second portion of the cushion in response to the sensor sensing that the user is not on the chaise lounge exposing the photovoltaic device to light energy to charge the rechargeable battery;

a lock-box fixedly supported by the frame, the lock-box including a lock-box door inclusive of a user interface; and

at least one electronic device integrated into the outdoor chaise lounge, the at least one electronic device configured to send a message via a communications network, the message including a unique identifier of the outdoor chaise lounge.

2. The outdoor chaise lounge according to claim **1**, wherein the rechargeable battery is in electrical communication with the photovoltaic device via a wireless connector.

3. The outdoor chaise lounge according to claim **1**, wherein said photovoltaic device is configured to be coupled to at least a portion of the seat member.

4. The outdoor chaise lounge according to claim **1**, wherein the lock-box is fixedly attached to the frame.

5. The outdoor chaise lounge according to claim **4**, further comprising:

a bracket configured to mount the lock-box to the frame;

fastening members configured to fixedly secure the lock-box to the frame; and

a cover member configured to prevent direct access to the fastening members,

wherein the cover member includes at least one cover fastening member being different from the fastening members.

6. The outdoor chaise lounge according to claim **1**, further comprising a power adapter outlet configured to enable a power adapter cord to be electrically connected thereto, thereby enabling the user to charge a rechargeable battery of an electronic device.

7. The outdoor chaise lounge according to claim **1**, further comprising at least one other electronic device in electrical communication with a rechargeable battery.

8. The outdoor chaise lounge according to claim **7**, further comprising a second user interface in electrical communication with (i) the rechargeable battery and (ii) the at least one other electronic device, wherein the at least one other electronic device includes a signal generator configured to generate an alert signal to alert an attendant proximate to the outdoor chaise lounge that the user has a request in response to the user activating the signal generator via the second user interface.

9. The outdoor chaise lounge according to claim **7**, wherein the at least one other electronic device includes an illumination device supported by the frame, wherein the lock-box further includes a circuit configured (i) to sense that the lock-box is in a lock state and cause the illumination device to illuminate and (ii) to sense that the lock-box is in an unlocked state and cause the illumination device to turn off.

10. The outdoor chaise according to claim **1**, wherein the seat member includes a first section and a second section, the first section being rotatable relative to the frame, wherein the lock-box includes an electronic lock mechanism that is configured to enable the user to set the first section to a particular rotatable position in which the user has to set the first section prior to the electronic lock mechanism to be able to unlock the lock-box.

11. The outdoor chaise lounge according to claim **1**, further comprising hardware configured to fixedly secure the lock-box to the outdoor chaise lounge.

12. The outdoor chaise lounge according to claim **1**, wherein the lock-box door is a drawer and wherein the drawer may be moved into an open position, wherein the open position is configured to be the drawer pulled out from the lock-box.

13. The outdoor chaise lounge according to claim **1**, wherein at least one of the frame or at least one of the plurality of legs includes an electrical conductor extending therethrough, the electrical conductor electrically coupled to the at least one electronic device.

14. The outdoor chaise lounge according to claim **1**, wherein the lock-box has a height of about two-inches.

15. The outdoor chaise lounge according to claim **1**, wherein the electronic device includes an electronic paper display.

16. The outdoor chaise lounge according to claim **1**, further comprising a fastening member disposed on the frame, the fastening member configured to prevent a towel from falling down.

17. The outdoor chaise lounge according to claim **1**, wherein the at least one electronic device is integrated in the frame or the at least one of the legs such that the at least one electronic device is flush with a top surface of the frame or the at least one of the legs.

18. The outdoor chaise lounge according to claim **17**, further comprising a flap or cover connected to the frame or the at least one of the legs and arranged to protect the at least one electronic device integrated in the frame or the at least one of the legs from being exposed to the environment.

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