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(54) **SYSTEM FOR STORING OF GOODS REQUIRING REFRIGERATION AND STORAGE DEVICE
ADAPTED FOR USE IN SUCH SYSTEM**

SYSTEM ZUM LAGERN VON KÜHLUNG ERFORDERNDEN WAREN UND ZUR VERWENDUNG IN
SOLCH EINEM SYSTEM AUSGEFÜHRTE LAGERUNGSVORRICHTUNG

SYSTÈME POUR LE STOCKAGE DE PRODUITS NÉCESSITANT UNE RÉFRIGÉRATION ET
DISPOSITIF DE STOCKAGE ADAPTÉ À UNE UTILISATION DANS UN TEL SYSTÈME

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Description

[0001] The present invention relates to a system for storing of goods requiring refrigeration comprising at least a first storage device adapted for the storage of goods in a storage space of a first housing, and at least a second storage device adapted for the storage of goods in a storage space of a second housing.

[0002] Refrigerating storing devices for providing chilled or refrigerated goods to customers or for storing of goods requiring refrigeration, for example, in bars or the like are known in a variety of constructions. For example, such refrigerating storing device may have the construction of a refrigerating cabinet having a vertically oriented storage space for the storing of goods, which storage space may be accessed by opening a door of the cabinet, the door thus representing an access element for accessing the storage space of the cabinet. According to another implementation, the refrigerating storing device may be constructed as a storage container having one or a plurality of drawers which may be pulled out from the container in order to have access to the goods stored in the drawers. Thus, such drawer represents an access element of the storage container for providing access to the goods stored therein.

[0003] With access members, such as doors or drawers, of refrigeration storing devices, such as used for refrigerated bars or the like, there may be used a mechanical key operated lock for locking and unlocking the respective access member of the storage device. With such mechanical lock, it is possible to prevent any unauthorized access to the storage device when the respective access member is in a locked state. On the other hand, authorized personnel may have access to the respective storage device with use of the respective key for unlocking the storage device. Typically, when used for example at refrigerated bars, there is not only one storage device which is accessed by the respective personnel, there are rather a number of storage devices each having a respective locking device for locking and unlocking the respective access member. With an increasing number of storage devices to be operated in this way the overall handling of the number of storage devices becomes cumbersome.

[0004] FR-A-2613465 and WO 2007/077095 A relate to devices for depositing and refrigerating objects so as to be inaccessible to unauthorised individuals. It would be beneficial to provide an improved system for storing of goods requiring refrigeration having multiple storage devices which is capable of providing easy access for persons using the system. To achieve the above advantages, the present invention provides a system according to claim 1. Further embodiments and aspects of the invention are evident from the dependent claims.

[0005] The invention will now be described with reference to the following disclosure of embodiments of the invention taken in conjunction with the accompanying drawings, wherein:

Fig. 1 shows an embodiment of a modular system for storing of goods requiring refrigeration having different storage devices with locking mechanisms according to the invention, in which the devices are not yet connected with each other;

Fig. 2 shows the system according to the embodiment of Fig. 1 in a connected condition of the storage devices;

Fig. 3 shows cross-sectional views of a storage device having a locking mechanism according to an embodiment of the invention; and Fig. 4 shows different conditions of an example of a mechanical lock assembly of a locking device which can be used in a system according to the invention.

[0006] In Figs. 1 and 2 there is shown a modular system comprising a plurality of storage devices for storing of goods requiring refrigeration according to an embodiment of the invention. The system 10 as shown in Figs. 1 and 2 comprises a number of different storage devices 1 to 5 which are all designed as respective parts of a modular system, wherein the storage devices 1 to 5 are adapted as modular storage segments of the system 10. Each of the storage devices 1 to 5 is adapted to be movable independently from one another. According to the modular design of the system 10, the storage devices 1 to 5 are adapted to be coupled with each other via a respective coupling device 61 as explained in more detail below. The storage devices 1 to 5 may have the same design as concerns construction of their respective storage case and/or access member, or may be designed differently as shown in Figs. 1 and 2. For example, the storage devices 2 and 3 are designed as respective self-supporting storage containers having respective access members 23 to 25 and 33 to 35, respectively, the access members comprising or being designed as drawers which may be pulled out from the storage containers when accessing the goods which are stored in the drawers. On the other hand, the storage devices 1 and 4, 5 are designed as self-supporting storage containers each comprising a respective door 13, 43 and 53 as an access member thereof, wherein the door 13, 43 and 53 may be opened or closed for providing access to the storage space of the containers 1, 4, 5, respectively.

[0007] In the embodiment of Figs. 1 and 2, the storage containers 4 and 5 are constructed to have almost the same design, wherein the hinge of the door 53 is on the left-hand side and the hinge of the door 43 is on the right-hand side of the respective container. Each of the storage devices 1 to 5 are formed as refrigerating storing devices, and may for example be formed as a refrigerating cabinet or refrigerating bar container. In the present application as shown in Figs. 1 and 2, the storage devices 1 to 5 are designed as a respective refrigerating bar container. When the storage containers 1 to 5 are connected side by side to one another, as shown in Fig. 2, the overall assembly of the system 10 of storage containers 1 to 5 is a storage module assembly having a substantially uni-

form access front.

[0008] As shown in an exemplary manner in Fig. 3 with respect to the storage container 2, the storage container 2 comprises a housing 21 which includes a storage space 22 which is adapted for the storage of goods which require refrigeration. The access members 23 to 25, which are designed as drawers in the present example, may be pulled out from the housing 22 in order to provide access to the respective storage space of the corresponding drawer. As shown in more detail in Fig. 3B which shows in more detail an upper portion of the storage container 2 as shown in Fig. 3A, the storage container 2 also comprises a locking device having components 26, 28 and 29 which is operable for locking and unlocking the access members 23 to 25. For example, the component 26 is an actuator which actuates a rod 28 for operating respective hooks 29 which may be raised for locking the respective drawers 23 to 25 when engaging the hook 29 with a corresponding projection of the drawer. Conversely, for unlocking the respective drawer, the hook 29 is lowered so as not to be in engagement with the corresponding projection of the drawer.

[0009] A similar principle may be used for locking and unlocking an access member which is formed as a door, wherein the skilled person is aware of how to construct a respective locking mechanism for locking and unlocking such access member. According to another embodiment, the locking device comprising components 26, 28 and 29 as shown in Fig. 3B may be implemented differently depending on the respective application, so that the present invention shall not be limited to the locking device as shown.

[0010] Modular refrigeration system 10 as shown in Figs. 1 and 2 may, in principle, comprise any number of storage devices of a particular design depending on the respective application. In the following description, the system according to the invention shall be described, at first, with respect to a system 10 only comprising storage devices 1 and 2 which may be coupled with each other. The principles described herein may also be applied when coupling storage device 1 with any other of the storage devices 3, 4 and 5.

[0011] The storage container 1 includes, similarly to storage container 2 shown in the cross-sectional view of Fig. 3, a storage space 12 of a housing 11, and further comprises a first locking device 16 which is operable for locking and unlocking the access member 13 which shall have the form of a door in the present example. The first locking device 16 comprises a receiving part for receiving key means for locking and unlocking the locking device 16. For example, the key means may be in the form of a mechanical key which is to be inserted into a corresponding key hole, or the key means may have the form of a chip card or the like which is designed for operating the locking device 16 in an electronical way, as is commonly known in the art. In contrast to storage container 1, the storage container 2 does not comprise a receiving part for receiving key means for operating the locking device

26, 28, 29 of the storage container 2. Rather, the second locking device 26, 28, 29 is operable by operation of the first locking device 16. The storage containers 1 and 2 are coupled with each other via a coupling 61 which comprises counteracting parts on each of the storage containers 1 and 2 which may be coupled with each other. Through such a coupling, such as shown in an exemplary manner at reference numeral 61 in Figs. 1 and 2, the storage containers 1 and 2 may be connected with each other, and thus connecting the first locking device 16 with the second locking device 26, 28, 29. The coupling device for coupling the storage containers to one another, such as coupling device 61 shown in Figs. 1 and 2, may comprise at least one device for providing at least one of an electrical wire connection, and electrical wireless connection, a magnetic connection and a mechanical connection between the storage containers 1 and 2. For example, the locking device 16 of the storage container 1 comprises an electrical actuator which actuates upon a corresponding operation of the key means the locking device 26, 28, 29 of storage container 2 through an electrical wire connection of coupling 61 between the storage container 1 and storage container 2.

[0012] The first locking device 16 thus functions as a central locking device which is operable to operate the second locking device 26, 28, 29 when operating the key means through the electrical wire connection (or any other connection as mentioned above) between the different storage containers, and is also operable to operate any further locking device for locking and unlocking a respective access member when coupled to the storage container 1. Therefore, locking device 16 functions as a kind of "master locking device" operating respective "slave locking devices" in respective storage containers 2 to 5.

[0013] Therefore, the invention provides a kind of central electronic locking system which only needs to operate a locking device 16 of storage container 1 for locking and unlocking anyone of the storage containers 1 to 5, so that there is no need to separately operate the storage containers 2, 3, 4 and 5 with separate key means. Therefore, the system according to the invention provides improved ergonomic properties.

[0014] In the embodiment as shown in Figs. 1 and 2, the storage containers 1 and 2 are arranged side by side, wherein the coupling device 61 is arranged at one peripheral surface of one of the storage containers, such as peripheral surface 17 and/or 18 of storage container 1. According to another embodiment, two corresponding coupling devices may be arranged at peripheral surfaces of the storage containers 1 and 2 facing each other for connection with each other.

[0015] If it is desired to enlarge the system 10 consisting of storage containers 1 and 2 as described above by adding another storage container to the system, a third storage container 3 or 4 may be coupled to either one of the storage containers 1 or 2 for enlarging the system. As shown in Figs. 1 and 2, the third storage container may be storage container 3 coupled side by side to the

storage container 2, or may be storage container 4 coupled side by side to the storage container 1 opposite to storage container 2. Each of the storage containers 3 and 4 comprises a locking device, such as locking device 26, 28, 29 as shown with respect to storage container 2, which is operable for locking and unlocking a respective access member of the storage container. Such locking device also acts as a "slave locking device", that is the locking device is operable by operation of the locking device 16.

[0016] In the case in which storage container 4 is added to the system 10, the storage container 1 is arranged between the storage containers 2 and 4 and is arranged in a way that the locking device 16 operates the respective locking devices of storage containers 2 and 4 through respective coupling devices 61 which are arranged at opposing surfaces 17, 18 of the storage container 1. On the other hand, if storage container 3 is added to the system 10 consisting of storage containers 1 and 2, the storage container 1 is arranged side by side to the storage container 2 which is arranged side by side to the storage container 3. In this embodiment, the locking device 16 operates the locking device of storage container 3 through a first coupling device 61 arranged between the storage containers 1 and 2 and through a second coupling device 61 arranged between storage containers 2 and 3.

[0017] In a particular implementation, the storage container 1 functioning as a kind of "central machine unit" may involve the following components: The locking device 16 may comprise an electrically operable key switch provided with a corresponding power supply for providing power to the electrical key switch. Further, the locking device may comprise at least one bi-stable solenoid functioning as an actuator, such as actuator 26 shown in Fig. 3. Such solenoid may operate at least one mechanical lock assembly such as the lock assembly shown in Fig. 3 with respect to components 28 and 29 which are operable by the solenoid for locking and unlocking the respective access member. These components may analogously be implemented in any or each of the locking devices provided in storage containers 1 to 5.

[0018] In a neutral position of the key switch, no power is supplied to the solenoids of the locking devices. When the key switch of the "master locking device" 16 is turned to the left, all electrical connected solenoids of all storage containers 1 to 5 will lock all access members of the system 10, that is all access members of the assembly of storage segments as shown in Figs. 1 and 2. When the electrical key switch of the "master locking device" 16 is turned to the right, all electrical connected solenoids of storage devices 1 to 5 will unlock all access members of the system 10. After turning to the left or to the right, the key switch of the "central machine unit" 1 will automatically go back to the neutral position. In other words, there is just a short electrical pulse required to be sent towards the solenoids of the whole system to lock and unlock respective access members.

[0019] In a further embodiment of the invention, the mechanical lock assembly which is operable by a respective solenoid for locking and unlocking a respective access member may comprise components such as shown in Fig. 4. The mechanical lock assembly 80 according to Fig. 4 comprises at least one pin 83, at least one hook 81 operated by the pin and at least one spring 82 coupled with the pin. In the embodiment of Fig. 4, the mechanical lock assembly comprises several components which interact as follows:

The involved components as shown in Fig. 4 are the hook 81, a push-spring 82, the pin 83, this is the 'shaft' of the solenoid, and a pull-spring 84 (not visible) connecting the pin 83 and the hook 81. The solenoid needs an electrical pulse only for the move from locked to unlocked position or from unlocked to locked position. If the mechanism is in the locked-position, the solenoid is in the position as mentioned in the first picture of Fig. 4 (situation 91), a static magnet (not shown) keeps the pin and the complete mechanism in this position (no current supply required). So, in this position the static magnet is stronger than the push-spring 82.

[0020] If the mechanism is in the unlocked position, the solenoid is in the position as shown in the second picture of Fig. 4 (situation 92), the push-spring 82 keeps the pin 83 and the complete mechanism in this position (no current supply required). So, in this position the push-spring 82 is stronger than the static magnet. The pull-spring 84 will only be stretched if the mechanism is locked and the door will be closed afterwards. This is shown in the third picture of Fig. 4 (situation 93). The position in situation 94 equals the position in situation 91. In this way, the springs of the mechanical lock assembly make it possible to close the access member even when the hook is already in the locked position.

[0021] While the invention has been described with reference to exemplary embodiments, it will be understood by those skilled in the art that various changes be made and equivalents may be substituted for elements thereof without departing from the scope of the claims. In addition, many modifications may be made to adapt the particular situation or material to the teachings of the invention without departing from the scope thereof. Therefore, it is intended that the invention not be limited to the particular embodiments disclosed, but that the invention will include all embodiments falling within the scope of the appended claims.

Claims

1. A system (10) comprising a plurality of refrigerated storage devices (1, 2, 3, 4, 5) for storing of goods requiring refrigeration, comprising
 - at least a first refrigerated storage device (1) adapted for the storage of goods in a storage space (12) of a first housing (11), the first storage

device comprising at least a first access member (13) which is lockable and unlockable for providing access to the storage space of the first housing,

- at least a second refrigerated storage device (2) adapted for the storage of goods in a storage space (22) of a second housing (21), the second storage device comprising at least a second access member (23 - 25) which is lockable and unlockable for providing access to the storage space of the second housing,

- the first refrigerated storage device (1) comprising a first locking device (16, 80) operable for locking and unlocking the first access member (13),

- the second refrigerated storage device (2) comprising a second locking device (26, 28, 29, 80) operable for locking and unlocking the second access member (23 - 25), each of the first and second locking devices (16, 26, 28, 29, 80) actuated by a solenoid (26), - wherein the first locking device (16, 80) is operable by key means for locking and unlocking the first locking device,

characterized by a coupling device (61) connected with the first locking device (16, 80) and adapted to be connected with the second locking device ;

wherein each of the first refrigerated storage device (1, 2, 3, 4, 5) and the second refrigerated storage device (1, 2, 3, 4, 5) are adapted as modular storage segments formed as respective self-supporting storage containers that are coupled to each other via their respective coupling device (61) so as to enable the first refrigerated storage device and the second refrigerated storage device to be moveably independent from one another and when coupled together the first locking device is operable to actuate the solenoid of the second locking device through the coupling device (61) .

2. The system (10) according to claim 1, wherein the coupling device (61) is arranged at the peripheral surface (17, 18) of the first and/or second storage devices (1, 2) such that the first and second storage devices are adapted to be arranged side by side.

3. The system (10) according to claim 2, wherein corresponding coupling devices (61) of the first and second storage devices face each other for connection with each other.

4. The system (10) according to any of the preceding claims, wherein the at least one coupling device comprises at least one device (61) for providing at least one of an electrical wire connection, an electrical wireless connection, a magnetic connection and a mechanical connection between the first and second storage devices (1, 2).

5. The system (10) according to any of claims 1 to 4, wherein at least one of the first and second storage devices (1, 2) is formed as a refrigerating cabinet or refrigerating bar container.

6. The system (10) according to any of claims 1 to 5, wherein at least one of the first and second access members comprises a door (13) or a drawer (23 - 25) to be locked and unlocked by a corresponding one of the locking devices (16, 26, 28, 29, 80).

7. The system (10) according to any of claims 1 to 6, wherein the first and second storage devices (1, 2) are adapted for forming a storage module assembly (10) having a substantially uniform access front.

8. The system (10) according to any of claims 1 to 7, wherein at least one of the first and second locking devices (16, 26, 28, 29, 80) comprises an electrically operable key switch.

9. The system (10) according to any of the preceding claims, wherein at least one of the first and second locking devices comprises at least one bi-stable solenoid (26) and at least one mechanical lock assembly (28, 29, 80) operable by the solenoid for locking and unlocking the respective access member.

10. The system (10) according to claim 9, wherein the mechanical lock assembly comprises at least one pin (83), at least one hook (81) operated by the pin, and at least one spring (82) coupled with the pin, the at least one spring (82) being arranged to bias the hook (81) to a lock position to lock the access member when the access member moves in the closed position.

Patentansprüche

1. System (10), das mehrere gekühlte Lagerungsvorrichtungen (1, 2, 3, 4, 5) zum Lagern von Waren, die eine Kühlung erfordern, umfasst, wobei das System Folgendes umfasst:

- wenigstens eine erste gekühlte Lagerungsvorrichtung (1), die für die Lagerung von Waren in einem Lagerungsraum (12) eines ersten Gehäuses (11) ausgelegt ist, wobei die erste Lagerungsvorrichtung wenigstens ein erstes Zugriffselement (13) umfasst, das verriegelt und entriegelt werden kann, um einen Zugriff auf den Lagerungsraum des ersten Gehäuses bereitzustellen,

- wenigstens eine zweite gekühlte Lagerungsvorrichtung (2), die für die Lagerung von Waren in einem Lagerungsraum (22) eines zweiten Gehäuses (21) ausgelegt ist, wobei die zweite La-

gerungsvorrichtung wenigstens ein zweites Zugriffselement (23-25) umfasst, das verriegelt und entriegelt werden kann, um einen Zugriff auf den Lagerungsraum des zweiten Gehäuses bereitzustellen,

- wobei die erste gekühlte Lagerungsvorrichtung (1) eine erste Verriegelungsvorrichtung (16, 80) umfasst, die zum Verriegeln und Entriegeln des ersten Zugriffselements (13) betätigt werden kann,

- wobei die zweite gekühlte Lagerungsvorrichtung (2) eine zweite Verriegelungsvorrichtung (26, 28, 29, 80) umfasst, die zum Verriegeln und Entriegeln des zweiten Zugriffselements (23-25) betätigt werden kann, wobei die erste und die zweite gekühlte Verriegelungsvorrichtung (16, 26, 28, 29, 80) durch einen Magnetschalter (26) betätigt werden,

- wobei die erste Verriegelungsvorrichtung (16, 80) durch Tastenmittel zum Verriegeln und Entriegeln der ersten Verriegelungsvorrichtung betätigt werden kann,

gekennzeichnet durch

eine Kopplungsvorrichtung (61), die mit der ersten Verriegelungsvorrichtung (16, 80) verbunden ist und ausgelegt ist, mit der zweiten Verriegelungsvorrichtung verbunden zu werden;

wobei die erste gekühlte Lagerungsvorrichtung (1, 2, 3, 4, 5) und die zweite gekühlte Lagerungsvorrichtung (1, 2, 3, 4, 5) als modulare Lagerungssegmente ausgelegt sind, die jeweils als selbsttragende Lagerungsbehälter ausgebildet sind, die über ihre jeweilige Kopplungsvorrichtung (61) so miteinander gekoppelt sind, dass die erste gekühlte Lagerungsvorrichtung und die zweite gekühlte Lagerungsvorrichtung unabhängig voneinander bewegt werden können, und dann, wenn sie miteinander gekoppelt sind, die erste Verriegelungsvorrichtung betätigt werden kann, um den Magnetschalter der zweiten Verriegelungsvorrichtung durch die Kopplungsvorrichtung (61) auszulösen.

2. System (10) nach Anspruch 1, wobei die Kopplungsvorrichtung (61) an der Umfangsfläche (17, 18) der ersten und/oder der zweiten Lagerungsvorrichtung (1, 2) so angeordnet ist, dass die erste und die zweite Lagerungsvorrichtung so ausgelegt sind, dass sie nebeneinander angeordnet sind.
3. System (10) nach Anspruch 2, wobei die entsprechenden Kopplungsvorrichtungen (61) der ersten und der zweiten Lagerungsvorrichtung für eine Verbindung miteinander einander gegenüberliegen.
4. System (10) nach einem der vorhergehenden Ansprüche, wobei die wenigstens eine Kopplungsvorrichtung wenigstens eine Vorrichtung (61) zum Be-

reitstellen einer drahtgebundenen elektrischen Verbindung, einer drahtlosen elektrischen Verbindung, einer magnetischen Verbindung und/oder einer mechanischen Verbindung zwischen der ersten und der zweiten Lagerungsvorrichtung (1, 2) umfasst.

5. System (10) nach einem der Ansprüche 1 bis 4, wobei die erste und/oder die zweite Lagerungsvorrichtung (1, 2) als ein Kühlgehäuse oder ein Kühltheckenbehälter ausgebildet sind.
6. System (10) nach einem der Ansprüche 1 bis 5, wobei das erste und/oder das zweite Zugriffselement eine Tür (13) oder eine Schublade (23-25) umfasst, die durch eine jeweilige Verriegelungsvorrichtung (16, 26, 28, 29, 80) verriegelt und entriegelt wird.
7. System (10) nach einem der Ansprüche 1 bis 6, wobei die erste und die zweite Lagerungsvorrichtung (1, 2) ausgelegt sind, eine Lagerungsmodulanordnung (10) zu bilden, die eine im Wesentlichen einheitliche Zugriffsfront aufweist.
8. System (10) nach einem der Ansprüche 1 bis 7, wobei die erste und/oder die zweite Verriegelungsvorrichtung (16, 26, 28, 29, 80) einen elektrisch betätigten Tastenschalter umfasst.
9. System (10) nach einem der vorhergehenden Ansprüche, wobei die erste und/oder die zweite Verriegelungsvorrichtung wenigstens einen bistabilen Magnetschalter (26) und wenigstens eine mechanische Verriegelungsanordnung (28, 29, 80) umfasst, die durch den Magnetschalter zum Verriegeln und Entriegeln des jeweiligen Zugriffselements betätigt werden können.
10. System (10) nach Anspruch 9, wobei die mechanische Verriegelungsanordnung wenigstens einen Stift (83), wenigstens einen Haken (81), der durch den Stift betätigt wird, und wenigstens eine Feder (82), die mit dem Stift gekoppelt ist, umfasst, wobei die wenigstens eine Feder (82) ausgelegt ist, den Haken (81) in eine Verriegelungsposition vorzubelasten, um das Zugriffselement zu verriegeln, wenn sich das Zugriffselement in die geschlossene Position bewegt.

Revendications

1. Système (10) comprenant une pluralité de dispositifs de stockage réfrigérés (1, 2, 3, 4, 5) destinés à stocker des biens nécessitant une réfrigération, le système comprenant :
 - au moins un premier dispositif de stockage réfrigéré (1) conçu pour le stockage de produits

dans un espace de stockage (12) d'une première habitation (11), le premier dispositif de stockage comprenant au moins un premier élément d'accès (13) qui est verrouillable et déverrouillable pour permettre l'accès à l'espace de stockage de la première habitation ;

- au moins un second dispositif de stockage réfrigéré (2) conçu pour le stockage de produits dans un espace de stockage (22) d'une seconde habitation (21), le second dispositif de stockage comprenant au moins un second élément d'accès (23-25) qui est verrouillable et déverrouillable pour permettre l'accès à l'espace de stockage de la seconde habitation,

- le premier dispositif de stockage réfrigéré (1) comprenant un premier dispositif de verrouillage (16, 80) permettant de verrouiller et déverrouiller le premier élément d'accès (13),

- le second dispositif de stockage réfrigéré (2) comprenant un second dispositif de verrouillage (26, 28, 29, 80) permettant de verrouiller et déverrouiller le second élément d'accès (23-25), les premier et second dispositifs de verrouillage réfrigérés (16, 26, 28, 29, 80) étant actionnés chacun par un solénoïde (26),

- le premier dispositif de verrouillage (16, 80) étant actionné par un moyen faisant clé permettant de verrouiller et déverrouiller le premier dispositif de verrouillage,

le système étant **caractérisé par** :

un dispositif d'accouplement (61) connecté au premier dispositif de verrouillage (16, 80) et conçu pour être connecté au second dispositif de verrouillage,

le premier dispositif de stockage réfrigéré (1, 2, 3, 4, 5) et le second dispositif de stockage réfrigéré (1, 2, 3, 4, 5) étant chacun conçus comme des segments de stockage modulaires se présentant sous la forme de contenants de stockage autoporteurs accouplés l'un à l'autre par l'intermédiaire de leur dispositif d'accouplement (61) respectif, de sorte que le premier dispositif de stockage réfrigéré et le second dispositif de stockage réfrigéré puissent se déplacer indépendamment l'un par rapport à l'autre et de sorte que, lorsqu'ils sont accouplés ensemble, le premier dispositif de verrouillage permette d'actionner le solénoïde du second dispositif de stockage par l'intermédiaire du dispositif d'accouplement (61).

2. Système (10) selon la revendication 1, dans lequel le dispositif d'accouplement (61) est disposé au niveau de la surface périphérique (17, 18) du premier et/ou du second dispositif de stockage (1, 2) de sorte que les premier et second dispositifs de stockage

soient conçus pour être disposés côte à côte.

3. Système (10) selon la revendication 2, dans lequel les dispositifs d'accouplement (61) correspondants des premier et second dispositifs de stockage sont en regard l'un de l'autre pour pouvoir se connecter l'un à l'autre.

4. Système (10) selon l'une quelconque des revendications précédentes, dans lequel l'au moins un dispositif d'accouplement comprend au moins un dispositif (61) destiné à fournir au moins une connexion parmi une connexion électrique filaire, une connexion électrique sans fil, une connexion magnétique et une connexion mécanique entre les premier et second dispositifs de stockage (1, 2).

5. Système (10) selon l'une quelconque des revendications 1 à 4, dans lequel au moins un des premier et second dispositifs de stockage (1, 2) se présente sous la forme d'une armoire de réfrigération ou d'un contenant de bar de réfrigération.

6. Système (10) selon l'une quelconque des revendications 1 à 5, dans lequel au moins des premier et second éléments d'accès comprend une porte (13) ou un tiroir (23-25) destiné à être verrouillé et déverrouillé par un dispositif correspondant des dispositifs de verrouillage (16, 26, 28, 29, 80).

7. Système (10) selon l'une quelconque des revendications 1 à 6, dans lequel les premier et second dispositifs de stockage (1, 2) sont conçus pour former un ensemble modulaire de stockage (10) comportant une partie avant d'accès sensiblement uniforme.

8. Système (10) selon l'une quelconque des revendications 1 à 7, dans lequel au moins un des premier et second dispositifs de stockage (16, 26, 28, 29, 80) comprend un interrupteur à clé pouvant être actionné électriquement.

9. Système (10) selon l'une quelconque des revendications précédentes, dans lequel au moins un des premier et second dispositifs de verrouillage comprend au moins un solénoïde bistable (26) et au moins un ensemble verrou mécanique (28, 29, 80) pouvant être actionné par le solénoïde pour verrouiller et déverrouiller l'élément d'accès respectif.

10. Système (10) selon la revendication 9, dans lequel l'ensemble verrou mécanique comprend au moins un axe (83), au moins un crochet (81) actionné par l'axe, et au moins un ressort (82) accouplé à l'axe, l'au moins un ressort (82) étant conçu pour solliciter le crochet (81) dans une position de verrouillage afin de verrouiller l'élément d'accès quand l'élément

d'accès se déplace dans la position de fermeture.

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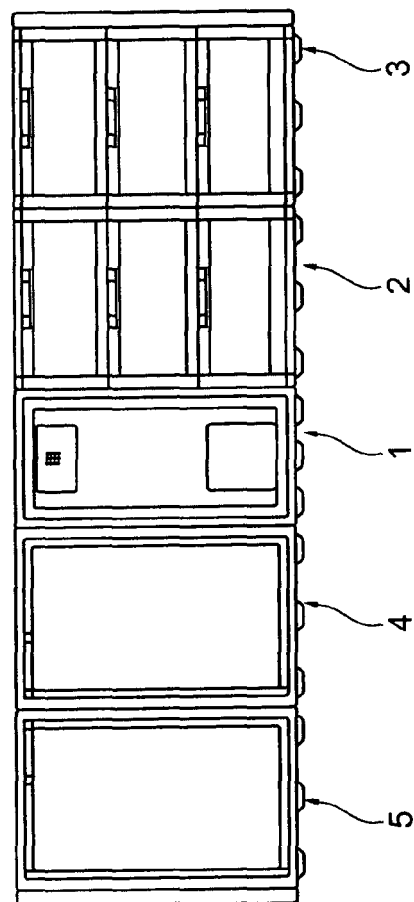
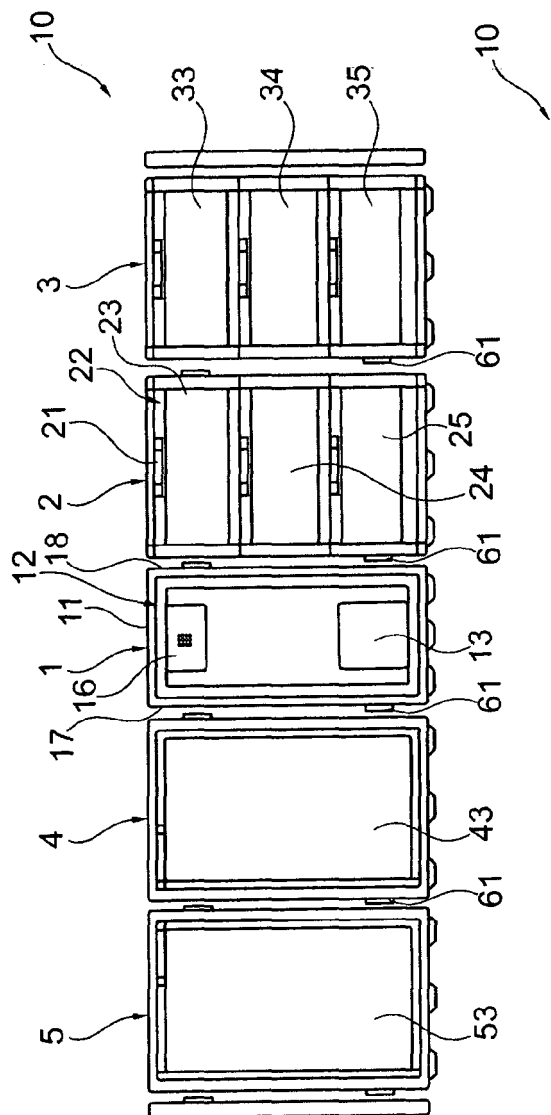
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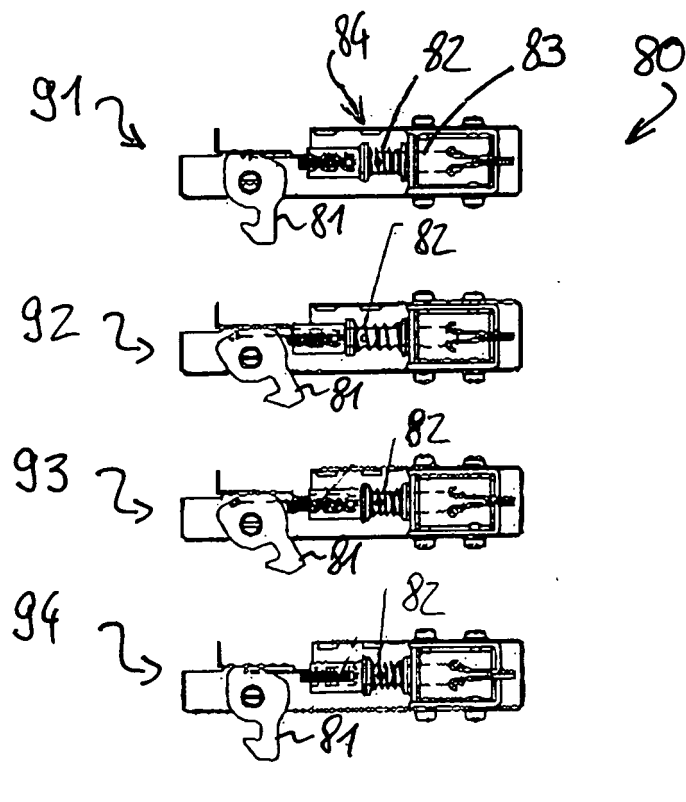
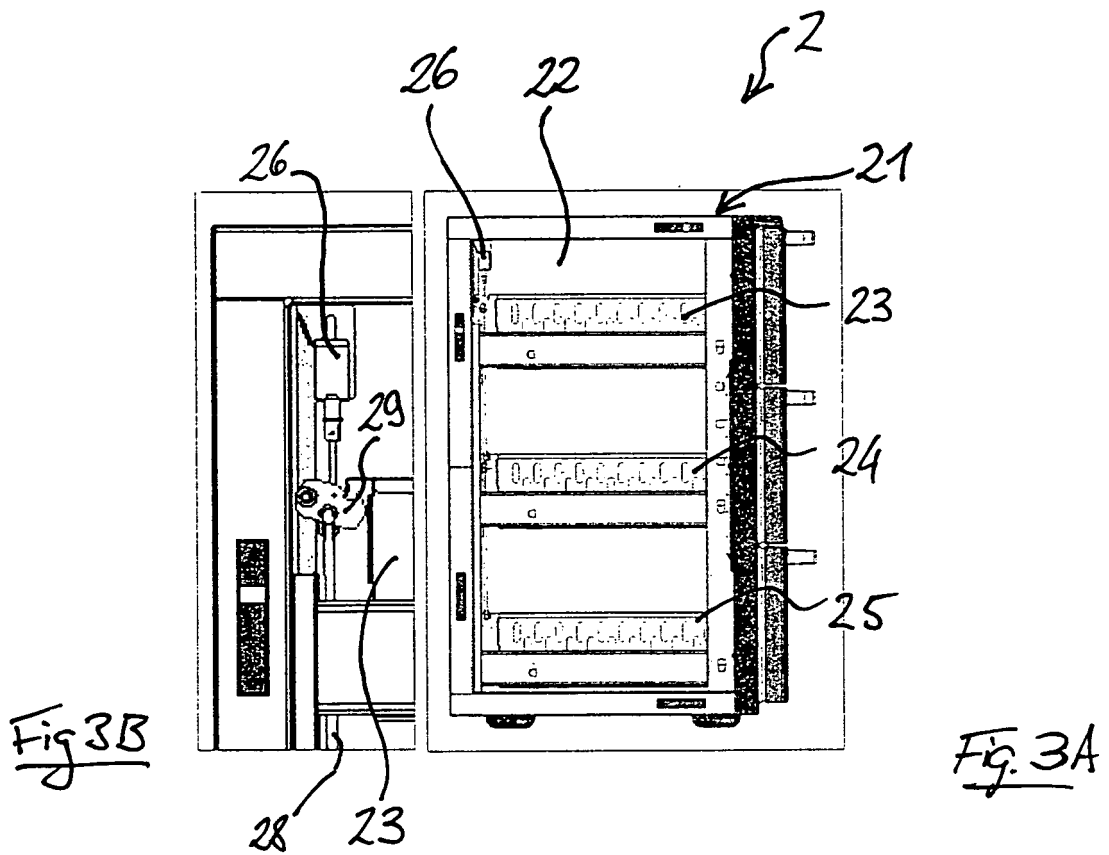
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REFERENCES CITED IN THE DESCRIPTION

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