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(11) **EP 1 028 216 A2**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
16.08.2000 Bulletin 2000/33

(51) Int. Cl.⁷: **E05G 1/08**

(21) Application number: **00200218.6**

(22) Date of filing: **21.01.2000**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE**
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **09.02.1999 NL 1011256**

(71) Applicants:
• **Senden, Pieter Jozef Marie**
6211 NK Maastricht (NL)
• **Smeets, Catharina Josephina Erna**
6211 NK Maastricht (NL)

(72) Inventors:
• **Senden, Pieter Jozef Marie**
6211 NK Maastricht (NL)
• **Smeets, Catharina Josephina Erna**
6211 NK Maastricht (NL)

(74) Representative:
Bleukx, Lucas Lodewijk M.
Hydro S.A.
Avenue Marcel Thiry 83
1200 Bruxelles (BE)

(54) **Locker system**

(57) A locker system has a number of individual locking compartments each having a lockable door and comprises a frame construction, the locking compartments being connectable to this frame construction. The frame construction can be releasably connected to a fixed box structure, and the compartments can be fixed to the frame construction in such a way that an accessible outer wall of the locker system is formed which is substantially covered by the lockable doors of the compartments.

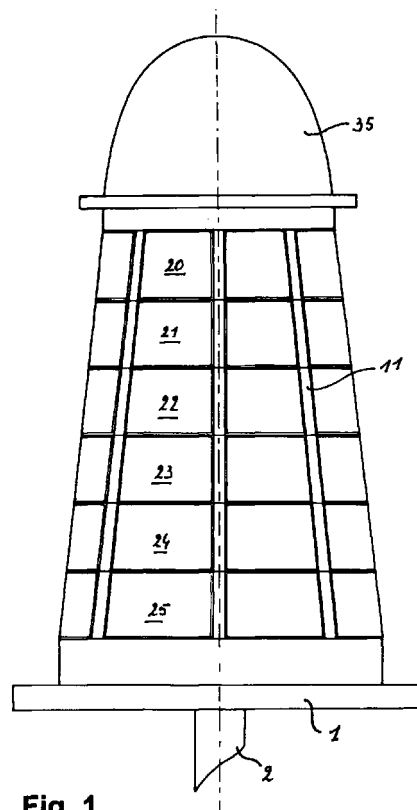


Fig. 1

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Description

[0001] The invention relates to a locker system having a number of individual locking compartments each having a lockable door comprising a frame construction, the locking compartments being connectable to said frame construction.

[0002] Such a locker system is generally known and in extensive use in railroad stations, airports, sport accommodations etc.

[0003] These known locker systems are fixed systems, which means that they are installed in one place and remain there always, special precautions being taken to avoid unauthorized opening of the closed locking compartments, e.g. by providing a solid wall against which the locking compartments are positioned with their rear wall, and if possible with their side walls.

[0004] In a number of situations however there is a need to have temporarily available a locker system. Known situations are summer beaches, outdoor festivals or celebrations etc., where a number of people like to be set free from some or the whole of their belongings during their stay in that environment. Mostly it is too expensive and not feasible to build special locking systems comparable to the permanent systems, as after some time there is no need anymore to have the systems available in that area. In other situations, like at summer beaches it is impossible to have permanent locker systems on the beach as in winter time the beach might be flooded.

Therefor there is a need for locking systems which can easily be displaced or which can easily be assembled and disassembled such that they can be positioned at any selected location, and at the same time offer an adequate and safe protection for the belongings of the people using a locker.

[0005] It is therefor an object of the invention to provide a locker system which can be used in the above mentioned circumstances and whereby the problems encountered with permanent locker systems can be avoided.

[0006] This object is achieved by means of a locker system according to the preamble which is characterized in that the frame construction can be releasably connected to a fixed base structure, and in that the compartments can be fixed to said frame construction in such a way that an accessible outer wall of the locker system is formed which is substantially covered by the lockable doors of the compartments.

[0007] In this way a locker system is obtained which can be disassembled when needed in separate units and therefor can be easily displaced. At the same time as the accessible outer wall is completely covered by the lockable doors of the locker systems, so that no easy access is left to the locker system for unauthorized removal of objects placed in lockers.

[0008] Other advantages and characteristics of the invention will become clear from the following descrip-

tion reference being made to the annexed drawings, in which:

Fig. 1 is a side elevation view of a locker system according to the invention,

Fig. 2 is a perspective view of the frame construction to be used with the locker system of Figure 1, containing already a number of locking compartments,

Fig. 3 is a perspective view of a number of locking compartments to be used in the locker system of Figure 1,

Fig. 4 is a perspective view of a modified embodiment of a number of locking compartments to be used in the locker system of Figure 1, and

Fig. 5 is a lateral cross section of a number of locking compartments as shown in Figure 4.

[0009] In the figures 1 and 2 there is shown a locker system according to the invention. As shown in Figure 1 the system comprises a base plate or bottom plate 1 which as such is movable, but which can be fixed to the bottom or floor by any suitable means. In Figure 1 there is shown a pole 2 by means of which the base plate 1 can be fixed to a soft bottom area by just driving the pole 2 into the bottom. But in other areas the bottom plate 2 can be fixed by any suitable means to any structure which is permanently connected to the bottom, e.g. a floor structure or base structure such as concrete blocks etc.

[0010] A frame structure 3 is connected to the base plate 1. As shown in Figure 2 the frame structure has generally a frusto-conical shape. It consists of a first number of vertical bars 4 which are interconnected by ring elements 5, 6, 7 such that the bars 4 are regularly spaced around the ring elements 5, 6, 7.

[0011] Extending from each ring element 5, 6, 7 in radial direction is a number of legs 8, 9, 10, the legs 8 connected to the upper ring 5 being shorter, than the legs 9 extending from the intermediate ring 6, which its turn is shorter than the legs 10 extending from the lowest ring 7. The legs 8, 9, 10 are positioned in such a way that each time one set of legs is located in a radial place with respect to the rings 5, 6, 7. To the free end of each set of legs 5, 6, 7 there is connected bar 11, and all bars 11 are located in a frusto-conical surface defining the general shapes of the frame structure.

[0012] The upper and lower ends of the bars 11 are connected to a ring structure 12, 13 respectively. Ring structure 13 can be connected to the base plate 1 or may be used directly as support on which the whole locker system can rest.

In the embodiment shown in Figure 2 the frame structure has a frusto-conical shape, but it is obvious that

other shapes are possible, especially cylindrical or any structure having a continuous side wall surface, such as structures with an elliptical horizontal cross-section. In the space defined by two neighbouring bars 11, the legs 8, 9, 10 connecting said bars to the rings 5, 6, 7 and these rings 5, 6, 7 a number of locker compartments 20-25 can be placed and connected to the frame structure 3.

[0013] As shown in Figure 2 and 3 each locker compartment 20-25 comprises a substantially rectangular box-like structure, having a rear wall, two sides to wall and a bottom and top wall.

The front wall 30 of each compartment 20-25 has a somewhat larger dimension, and is shaped in such a way that it substantially fills the space between the two neighbouring legs 11 at the relevant height. In view of the frusto-conical shapes of the frame structure 3 each locker compartment 20-25 has a slightly different front wall dimension, although their box-like structures may be identical.

Each front wall 30 is provided with a door 31 which is provided with a lock (not shown) as is generally known in the art. The lock may be coin operated as normally used in this type of locker systems.

The locker compartment 20-25 can be connected to the frame structure 11 by any suitable fastening means. The requirements for these means are that they must be releasable, but that after having filled the whole circumference of the frame structure, these fastening means may not be accessible from the outside. This means that all fastening means must be covered either by the front walls 30 or by the bars 11.

[0014] One convenient way of fastening the individual locker compartments 20-25 is by means of screws or the like which connect the rear walls of the compartments 20-25 to any structure (not shown) permanently connected to the frame 3. This might be done by means of screws accessible through the open doors of the locker compartments.

[0015] More preferred is the embodiment in which all compartments are connected from the inner sides of the frame structure 3. For that purpose the cylindrical spaces inside the rings 5, 6, 7 can be used by a skilled man to fasten the individual locker compartments, preferably starting with the lower row and going upwardly. In this situation fastening can be done in any convenient way such as screwing, but also quick release coupling, etc. as they are absolutely not accessible from outside.

[0016] After finishing his job, the attendant can leave the cylindrical space by climbing upwardly or by being lifted out of that space.

As shown in Figure 1 the completed locker system can subsequently be provided with a roof structure 35.

In Figure 4 there is shown another embodiment of locker compartments to be used according to the invention. The locker compartments are shaped as one unit 40 existing of six super imposed locker compartments having the same shape as the locker compartments 20-

25 except for the fact that they have one common front wall with six doors, one for each of the locker compartments.

[0017] The advantage of this system is that assembling and disassembling of the locker system is easier and quicker, and the whole system is less susceptible for being cracked, as the outer wall must be removed as a whole.

[0018] In Figure 5 there is shown a somewhat modified embodiment of a locker compartment according to the invention. The locker compartments are formed as one unit 50, comparable to the unit 40 of Figure 4, but now two successive locker compartments in the unit have a common wall 51, or 52, being either the upper wall of compartments 56, 57.

[0019] The unit 50 also has a common rear wall 60 suitable for being fixed to the frusto-conical frame structure, which rear wall is positioned vertically, thereby improving the assembly.

[0020] A special feature shown in the embodiment of Figure 5 is that the doors 61, 62, 63 constitute one continuous surface in the vertical direction. The inner wall of each door 61, 62, 63 is provided with a pocket like extension 64, 65, 66 which can be used for storing small items, such as keys, wallets and the like thereby improving the access to different items stored inside the locker compartments.

[0021] A special feature of the locker system according to the invention resides in the lock itself. In order to make it as comfortable as possible for the user it is preferred to use a cipher lock which can be programmed by the user. Most preferably a 4-digit cipher lock is used so that the user is capable of using one of his well-known pin codes. In this way, it is achieved that the user is not obliged to take care about a key or the like.

[0022] Otherwise it is preferred to use a time dependent lock, which means a lock which for a certain amount of money keeps the locker compartment closed for a defined time and also afterwards, but when the user is too late, he must pay a surcharge before he will be able to open the lock, which surcharge may be dependent about the overtime used. Otherwise the lock is designed in such a way that within the defined time period it becomes possible to open and close the door as often as needed without the obligation to renew the payment.

Claims

1. Locker system having a number of individual locking compartments each having a lockable door comprising a frame construction, the locking compartments being connectable to said frame construction, characterized in that the frame construction can be releasable connected to a fixed base structure, and in that the compartments can be fixed to said frame construction in such a way

that an accessible outer wall of the locker system is formed which is substantially covered by the lockable doors of the compartments.

2. Locker system according to claim 1, each compartment having a rear wall and a number of side walls, characterized in that the locking compartment can be fixed to the frame constructions through implements fixed to one of these walls. 5
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3. Locker system according to claim 2, characterized in that the implements for fixing the compartment to the frame construction are accessible through an open locking compartment. 15
4. Locker system according to claim 2, characterized in that the implements for fixing the compartment to the frame construction are only accessible from the outside of the wall to be formed by the rear walls of the locking compartments. 20

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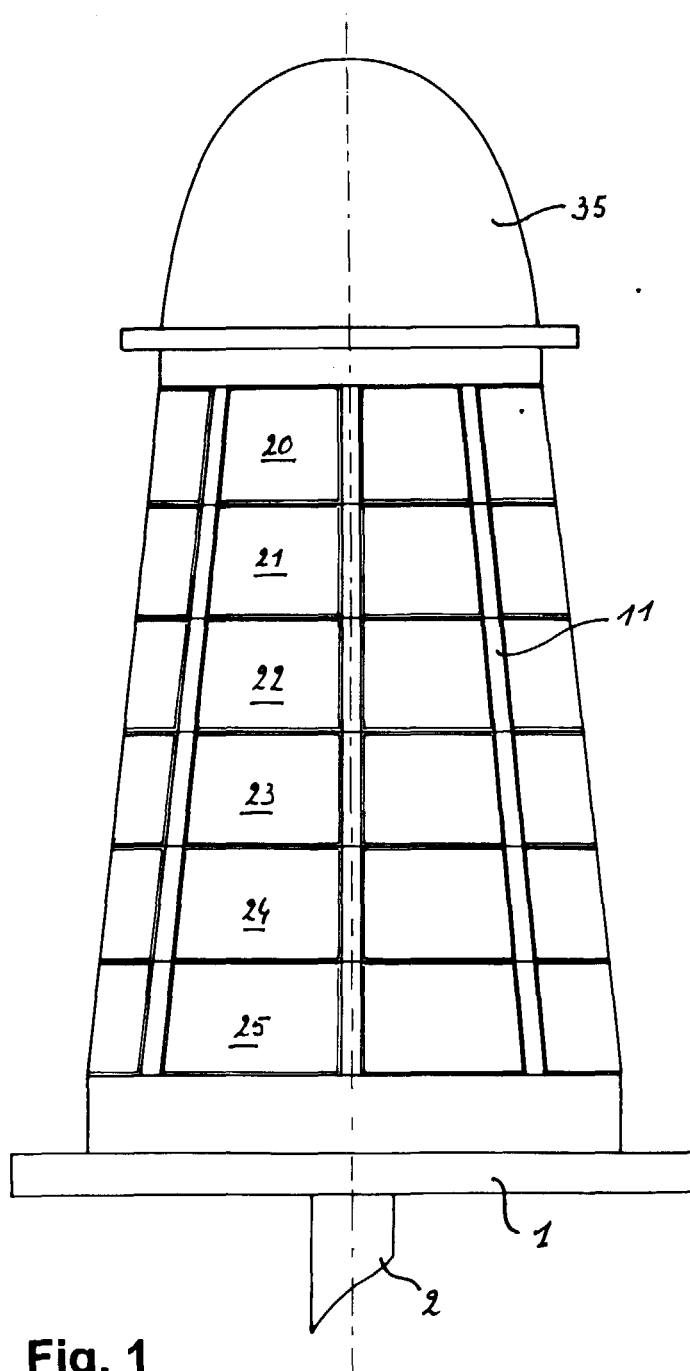


Fig. 1

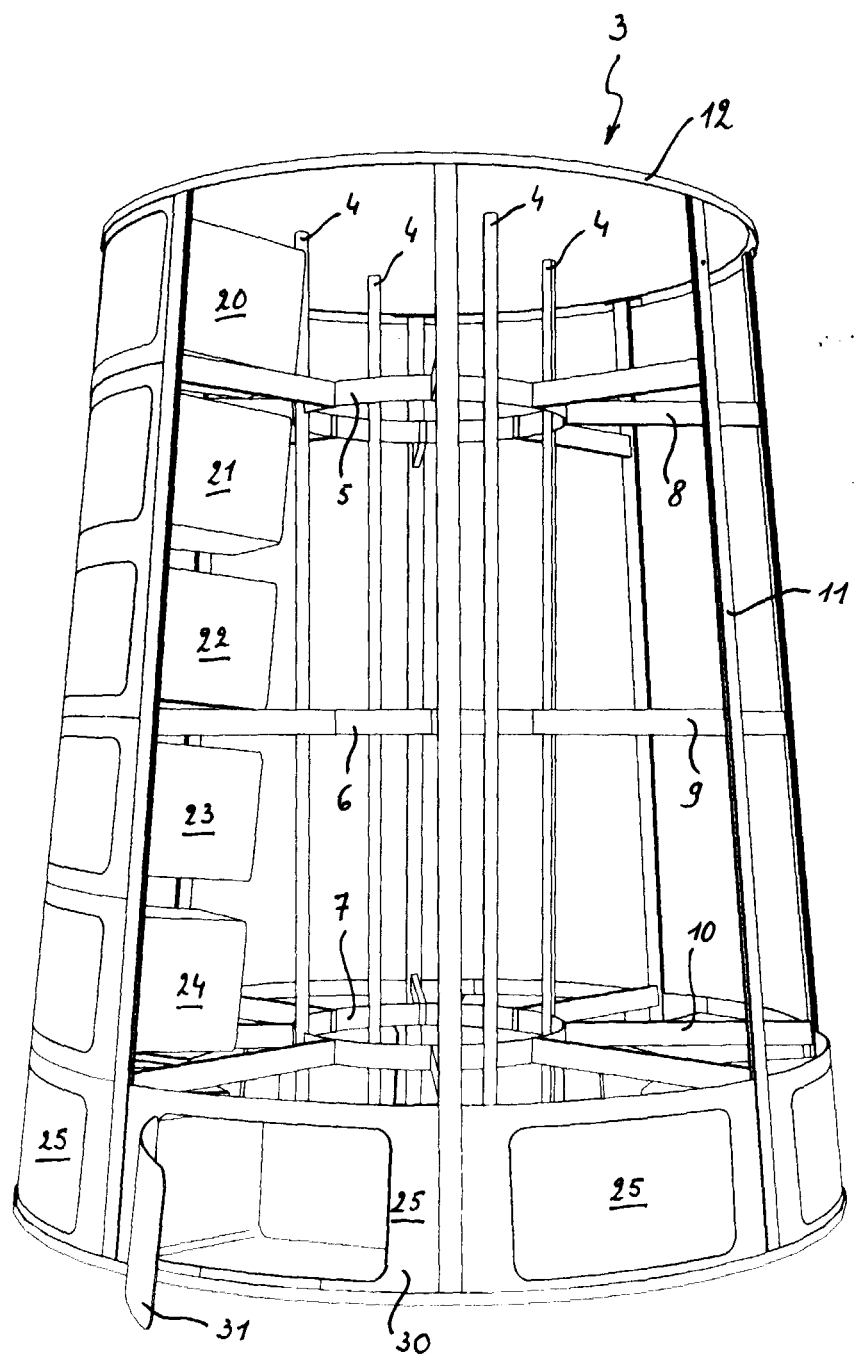


Fig. 2

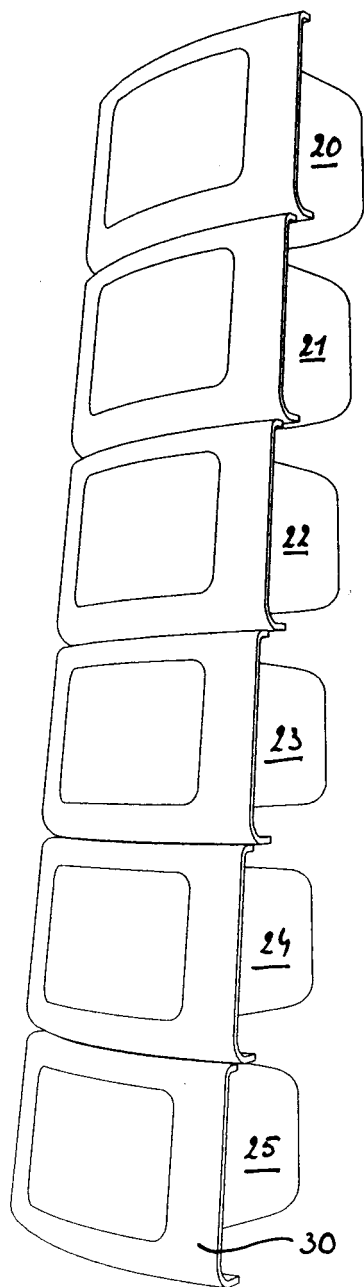


Fig. 3

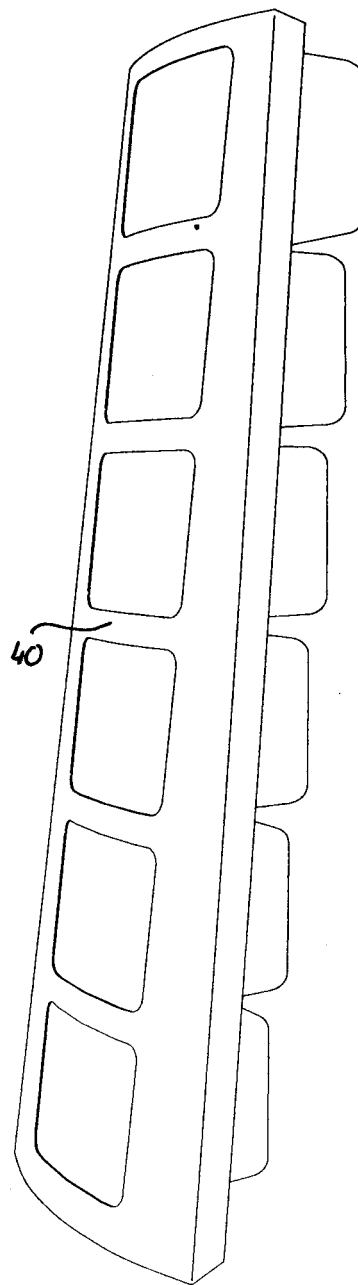


Fig. 4

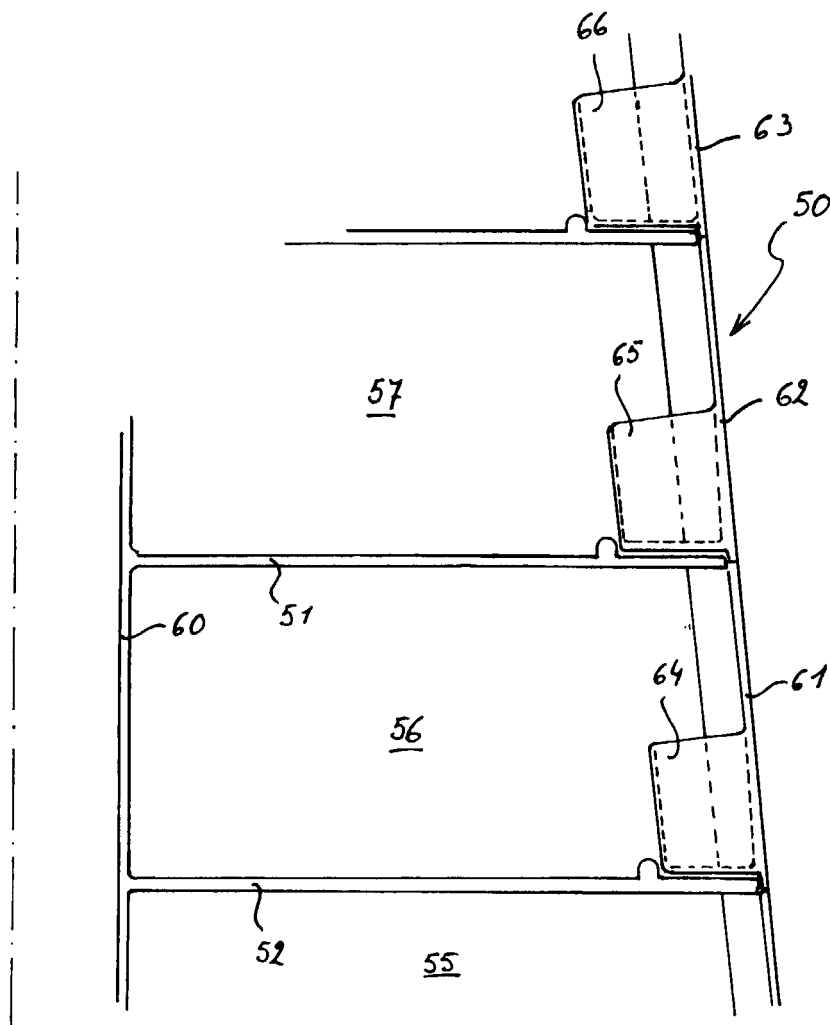


Fig. 5