

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 1 006 245 A2

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

07.06.2000 Bulletin 2000/23

(51) Int Cl.7: **E04H 3/02**

(21) Application number: **99309640.3**

(22) Date of filing: **01.12.1999**

(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: **02.12.1998 GB 9826508**

(71) Applicant: **European & American Investment
Holdings Limited**

London W11 4LG (GB)

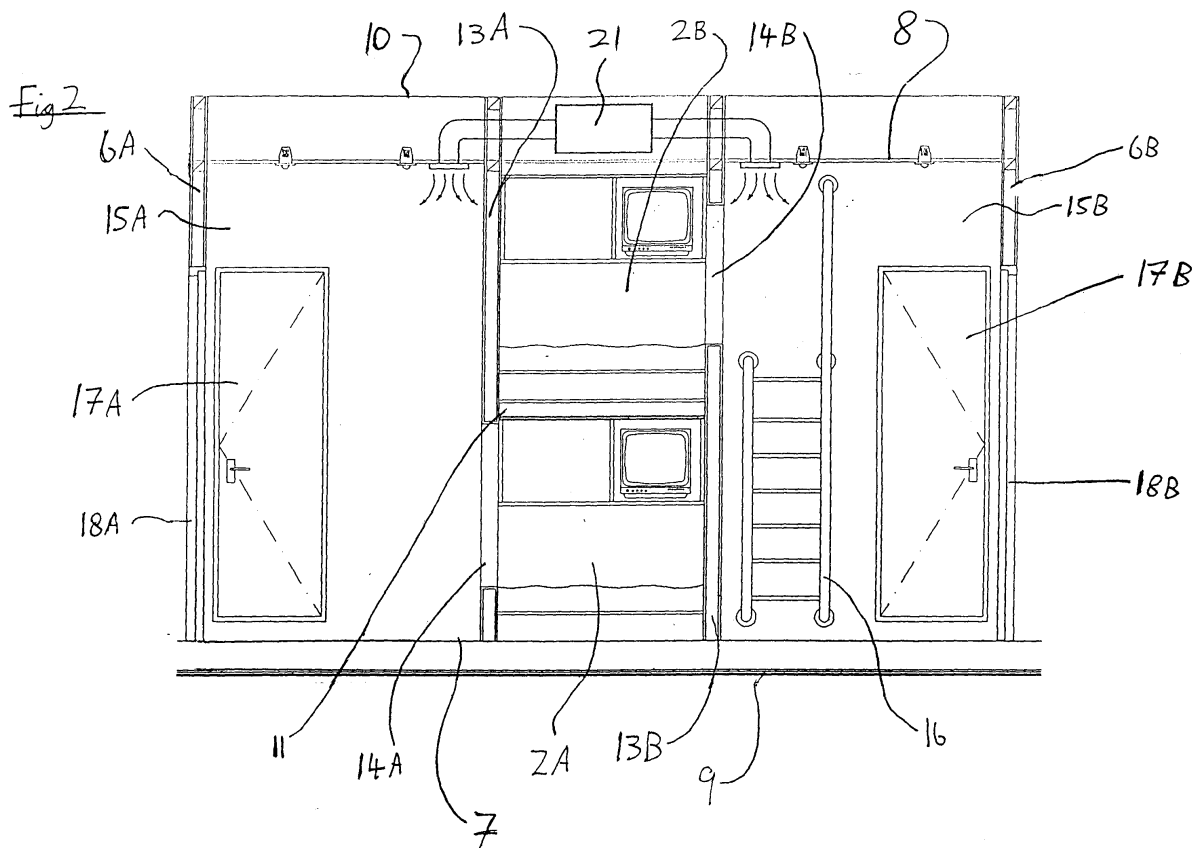
(72) Inventor: **Donovan, Michael Patrick**
London W11 4LG (GB)

(74) Representative: **Rees, Alexander Ellison et al**
Urquhart-Dykes & Lord
91 Wimpole Street
London W1M 8AH (GB)

(54) **Accommodation**

(57) Accommodation comprises two units 1a, 1b each having a sleeping section 2a, 2b and a living sec-

tion 3a, 4a, 5a, 3b, 4b, 5b, the living sections of the two units being adjacent at the same level and the sleeping sections lying one above the other.



EP 1 006 245 A2

Description

[0001] The present invention relates to accommodation and particularly to prefabricated accommodation.

[0002] There is a general requirement for low cost temporary accommodation such as hotel rooms, and particularly for low cost short term accommodation for travellers breaking their journeys and for persons attending conferences or conventions.

[0003] The cost of travel is steadily reducing in real terms and as result the demand for such low cost short term accommodation is steadily increasing.

[0004] It is proving difficult to meet this demand at an acceptable cost because of the expense of erecting purpose built hotels or converting existing buildings into hotels, particularly in city centre locations where the cost of land is extremely high.

[0005] In order to solve the problem of providing low cost accommodation attempts have been made to fit as many accommodation units as possible into the available area and volume. Such an approach has been attempted in Japan where individual accommodation units containing a bed and a television with a lockable door are stacked to provide secure sleeping accommodation while changing and washing facilities are provided communally. This approach has proved successful in Japan but has proved unsuccessful in other countries where the standard of comfort and privacy provided is regarded as unacceptable for cultural reasons.

[0006] Another approach to resolving the problem of providing acceptable accommodation at a low price has been to attempt to reduce the cost of erecting hotels by constructing rooms in prefabricated form at a central factory and then simply assembling them on site as the hotel is constructed. This approach can reduce the cost of purpose built hotels but cannot easily be applied to conversion of existing buildings into hotels because the prefabricated room dimensions and arrangement may not be compatible with the space available in the converted building.

[0007] The present invention is intended to overcome these problems, at least in part.

[0008] This invention provides accommodation comprising at least two units, a first unit and a second unit being situated adjacent one another and each having a sleeping section and a living section, the living sections of the first and second units being at substantially the same level and the sleeping sections of the first and second units being at least partly superimposed.

[0009] For a given size of sleeping section of each unit and a given area allocated to the living section of each unit, this allows the number of units per unit volume or unit area to be increased without any reduction in the degree of comfort and level of privacy of the accommodation perceived by the user.

[0010] Preferred embodiments of the invention will now be described by way of example only with reference to the accompanying diagrammatic figures in

which:

Figure 1 shows a plan view of a pair of accommodation units according to a first embodiment of the invention;

Figure 2 shows a cut away view through the accommodation unit of Figure 1 along the line A-A of Figure 1;

Figures 3a and 3b show axonometric views of the accommodation units of Figure 1 from two different directions with one wall shown by dashed lines in order to reveal the internal structure; and

Figure 4 shows a plan view of an alternative design of a pair of accommodation units according to a second embodiment of the invention.

[0011] Referring to Figures 1 to 3, in the first embodiment an accommodation cell is formed by first and second accommodation units 1a and 1b.

[0012] Each accommodation unit 1a, 1b comprises a bed section 2a, 2b and a living section formed by a lavatory and bathroom area 3a, 3b and a general area 4a, 4b giving access to a storage area 5a, 5b respectively.

[0013] Each cell is defined by four vertical external walls 6a to 6d arranged to form a rectangle and extending between a cell floor 7 and false ceiling 8. Each such accommodation cell formed by two accommodation units 1a and 1b is a free standing structure situated between a floor 9 and ceiling 10 of an external building structure which can be the building structure of a purpose built hotel or can be the structure of whatever existing building structure or shell the accommodation units are placed within.

[0014] Each accommodation cell is free-standing and is independent of any other cells or the building structure except that there obviously must be sufficient building structure below the accommodation cell to support it. Although the building structure of floor and ceiling 9 and 10 are shown as continuous and horizontal in the examples there is no requirement that this be the case, the size and shape of the void above the ceiling 8 of the accommodation unit is entirely irrelevant while height variations in the floor 9 can be adjusted for by providing suitable supports beneath the accommodation cell between the cell floor 7 and the building floor 9. Although it would of course be possible to support the accommodation cell in locations where there was no continuous building floor 9 but only a series of spaced apart structural members, it is preferred to place the accommodation cell over a continuous building floor 9 because the safety and legal requirements regarding the materials and characteristics of the accommodation cell floor 7 will be far more onerous if it is the only floor support.

[0015] The bed sections 2a and 2b of the first and second accommodation units 1a and 1b are arranged to be superimposed one above the other so the bed section 2b of the second accommodation unit 1b is situated directly above the bed section 2a of the first accommoda-

tion unit 1a. The two bed sections 2a and 2b are separated from the living section of the first accommodation unit 1a by a first internal wall 13a and are separated from the living section of the second accommodation unit 1b by a second internal wall 13b. The first and second internal walls 13a and 13b have respective first and second openings 14a and 14b allowing access to the bed sections 2a and 2b from the living sections of the first and second accommodation units 1a and 1b respectively. The bed sections 2a and 2b are separated by an internal floor 11 and are bounded at a first end by the external wall 6c of the accommodation cell and at the other end by a third internal wall 12.

[0016] Thus, the bed sections 2a, 2b of the first and second accommodation units 1a, 1b are entirely separate and inaccessible from one another. The bed sections 2a, 2b are accessible only from the other parts of their respective accommodation units 1a and 1b and are inaccessible from the other respective accommodation unit 1a, 1b.

[0017] The bathroom areas 3a and 3b of the first and second accommodation units 1a and 1b are separated from their respective general areas 4a and 4b by fourth internal walls 15a and 15b with access doors 17a and 17b respectively. In the second accommodation unit 1b a ladder 16 is attached to the fourth internal wall 15b to allow easy access to the bed section 2b.

[0018] Access to the first and second accommodation units 1a and 1b is through respective doors 18a and 18b in respective external walls 6a, 6b of the accommodation cell. Further, in order to prevent the accommodation units 1a and 1b being too claustrophobic respective windows 18a and 18b are also provided in said external walls 6a, 6b.

[0019] The first and second accommodation units 1a and 1b are provided with respective storage areas 5a, 5b defined between an external wall 6b of the accommodation cell and the third internal wall 12. The storage areas 5a, 5b of the first and second accommodation units 1a and 1b are separated by a fifth internal wall 20.

[0020] In the first embodiment the bed sections 2a, 2b are slightly larger in area than a bed and contain a bed together with television and some storage and shelf space. The bathroom areas 3a, 3b include a shower, lavatory and wash basin and the general areas 4a, 4b include a desk and chair together with a trouser press situated behind the respective door 18a, 18b.

[0021] The precise nature, number and size of these fixtures and fittings is not an essential part of the invention. However, the inclusion of all of these elements is preferred in order to provide the standard of accommodation expected by most travellers.

[0022] In the first embodiment the width of the accommodation cell is significantly larger than the length of the bed. It is difficult to reduce the width dimension of the cell further because of the clearances required by the various doors and fittings. If some of the fittings were rearranged or not included or the doors replaced by slid-

ing units it might be possible to reduce the accommodation cell width. However, such a reduction would reduce or eliminate the provided storage space.

[0023] It is preferred for the accommodation units to have air-conditioning and it is convenient for this to be provided by individual air-conditioning units 21 associated with each cell to ensure that the individual cells are wholly modular. Such arrangement is shown in Figure 2 however this is not essential and air-conditioning could be omitted or could be provided by a central or group air-conditioning unit supplying conditioned air to all or some of the accommodation cells. Where a separate air-conditioning unit for each accommodation cell is provided it is convenient to place the air-conditioning unit above the cell false ceiling 8 over the bed sections 2a, 2b and if this is done it is preferred to have the false ceiling 8 thicker over the bed sections 2a, 2b to minimise noise. The doors 18a, 18b and windows 19a, 19b are placed in end walls 6a, 6b of the accommodation cell because this allows the accommodation cells to be arranged in rows with corridors running along either side of the rows and cells for access.

[0024] The accommodation cells according to this embodiment are free-standing and self supporting and once assembled require only electrical power, plumbing and data connections, for example for telephones and television, to be connected to be ready for use.

[0025] Depending on the nature of the floor 9 access to the accommodation cell along corridors could be directly on the floor 9 with extensions added to the bottoms of some or all of the walls 6a to 6d of each accommodation cell to seal the void between the cell floor 7 and building floor 9 or a corridor floor level with the cell floors 7 could be fitted, as is convenient.

[0026] In the first embodiment of Figures 1 to 3 a pair of single room units 1a and 1b are shown.

[0027] A second embodiment is shown in Figure 4 where the accommodation cell has had the sleeping sections 2a, 2b enlarged to accommodate double beds. Otherwise, the general arrangement is the same as in the first embodiment.

[0028] In the second embodiment the access doors 18a, 18b and windows 19a, 19b have been moved to be in external wall 6d of the cell rather than walls 6a and 6b and a further window 21a, 21b is provided from each of the first and second bed sections 2a, 2b respectively through the wall 6c of the accommodation cell.

[0029] Clearly, windows 21 cannot be provided where the accommodation cell is not located adjacent to an external wall of the building.

[0030] Placing the doors 18a, 18b in the wall 6d of the accommodation cell allows the cells to be placed in a row side by side with access along a single corridor only.

[0031] The door arrangement of the second embodiment allows more accommodation cells to be fitted within the given area because less corridor space is required for access. However, the door arrangement shown in Figures 1 to 3 may be more convenient under some cir-

cumstances or may be necessary to fit in with existing building access and to allow sufficient exit routes for fire safety.

[0032] In the first and second embodiment the rooms are opposite handed. That is, the first and second accommodation units 1a and 1b are on opposite sides of the accommodation cell.

[0033] Further, in the second embodiment the ladder 16 of the first embodiment is replaced by a number of steep steps 22. Steps take up more floor area than a ladder, but allow easier access to the second bed section 2b.

[0034] It will be appreciated that various features of the first and second embodiments can be exchanged as necessary.

[0035] The accommodation cell of the first embodiment is entirely self contained in that when placed adjacent to other cells the external walls are simply in contact but no support of one cell by another is required. Of course, it may be desirable to secure the walls of adjacent accommodation cells together.

[0036] An alternative arrangement is shown in the second embodiment where adjacent accommodation cells share a common wall. Such an arrangement can easily be allowed for in preparing the accommodation cells by constructing them with one wall omitted and securing together where they are to be used. An additional end wall can then be attached to the last accommodation cell in each line. Other arrangements allowing wall sharing are possible.

[0037] Further, the accommodation cells shown in all of the figures use their own walls only and are completely independent of any walls or supports of the building they are within. This is not essential and walls could be omitted where they face up against existing structural walls of the building to reduce materials costs. However, the cost savings by doing this will normally be outweighed by the additional construction costs caused by the requirement to prepare cells with missing walls and secure the remaining cell walls and internal fixtures and fittings to the buildings structural walls.

[0038] In both embodiments the outer surface of the accommodation cell and the walls and internal floor separating the first and second accommodation units have a sound insulating value of -50dB. Other values can of course be used.

[0039] In practice it may be preferred to arrange the bathroom areas so that the lavatory cistern and washbasin are located away from the bed sections to reduce noise.

[0040] The storage areas could be placed elsewhere or eliminated if desired.

[0041] Accommodation according to the invention can provide low cost accommodation in both purpose built hotels and in converted buildings and structures because a larger number of accommodation units of a particular specification in terms of facilities, comfort and area available for use by the occupant can be fitted into a

given area or volume of the building. Further, the self contained free-standing nature of the cells allows them to be fully constructed in flat-pack form at a central production facility and be simply assembled and secured in place and the necessary connections made to provide accommodation. This free-standing nature allows the accommodation units to be set up regardless of the shape and size of a converted building or structure.

[0042] Although the invention is discussed above in terms of providing accommodation in buildings, accommodation arranged according to the invention could be used to provide the same advantages in mobile accommodation on vehicles.

[0043] In the description the section of the accommodation unit slept in is referred to as the bed section. This is not limited to containing a bed but could contain other sleeping facilities, such as a futon for example.

[0044] It is not essential for the bed sections of the first and second units to be entirely over one another, but this is usually the simplest and most efficient arrangement.

[0045] It will be appreciated by the person skilled in the art that the above description is only exemplary and numerous changes could be made in the described embodiments.

Claims

1. Accommodation comprising at least two units, a first unit and a second unit being situated adjacent one another and each having a sleeping section and a living section, the living sections of the first and second units being at substantially the same level and the sleeping sections of the first and second units being at least partly superimposed.
2. Accommodation as claimed in claim 1, in which living sections of each unit are divided into a lavatory and washing area and a general area.
3. Accommodation as claimed in claim 1 or claim 2, in which the accommodation units are arranged in accommodation cells each comprising an adjacent first and second unit enclosed by walls, a ceiling and a floor.
4. Accommodation as claimed in claim 3, in which each accommodation cell is free-standing.
5. Accommodation as claimed in any one of claims 2 to 4, in which the lavatory and washing area of each unit contains a shower, a lavatory and a washbasin.
6. Accommodation as claimed in any preceding claim, in which the sleeping section contains a bed.
7. Accommodation as claimed in any preceding claim

in which each accommodation cell is provided in a flat-pack form.

8. Accommodation as claimed in any one of claims 1 to 6 in which the accommodation units are mounted on a vehicle. 5

10

15

20

25

30

35

40

45

50

55

