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(54) **A BOOTH**

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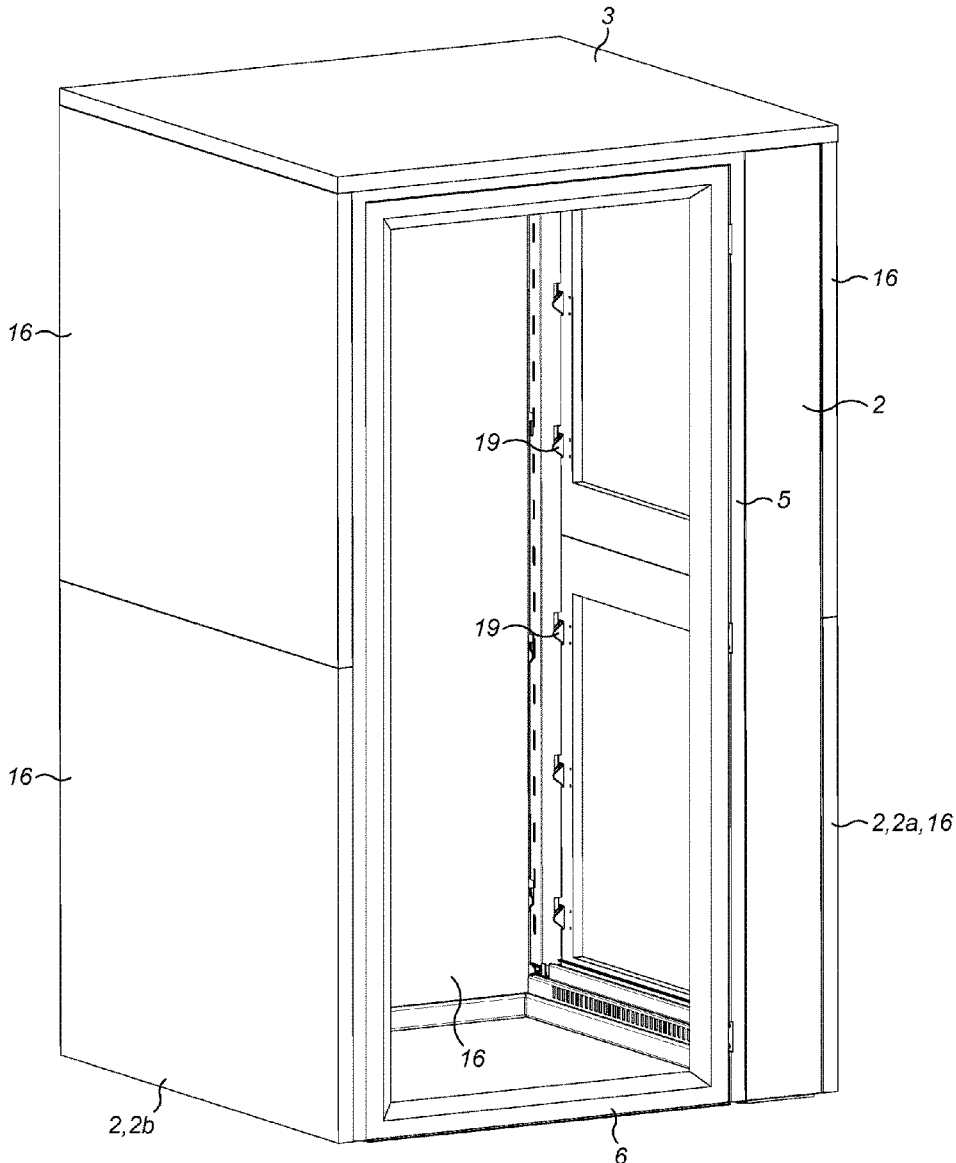
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(57) **ABSTRACT**

A freestanding booth comprising a plurality of upstanding peripheral walls, a roof and a base upon which the booth stands in use, one of the walls defining an opening that is closed by a door, wherein the base extends along a basal edge of a plurality of the walls but does not extend across the opening.

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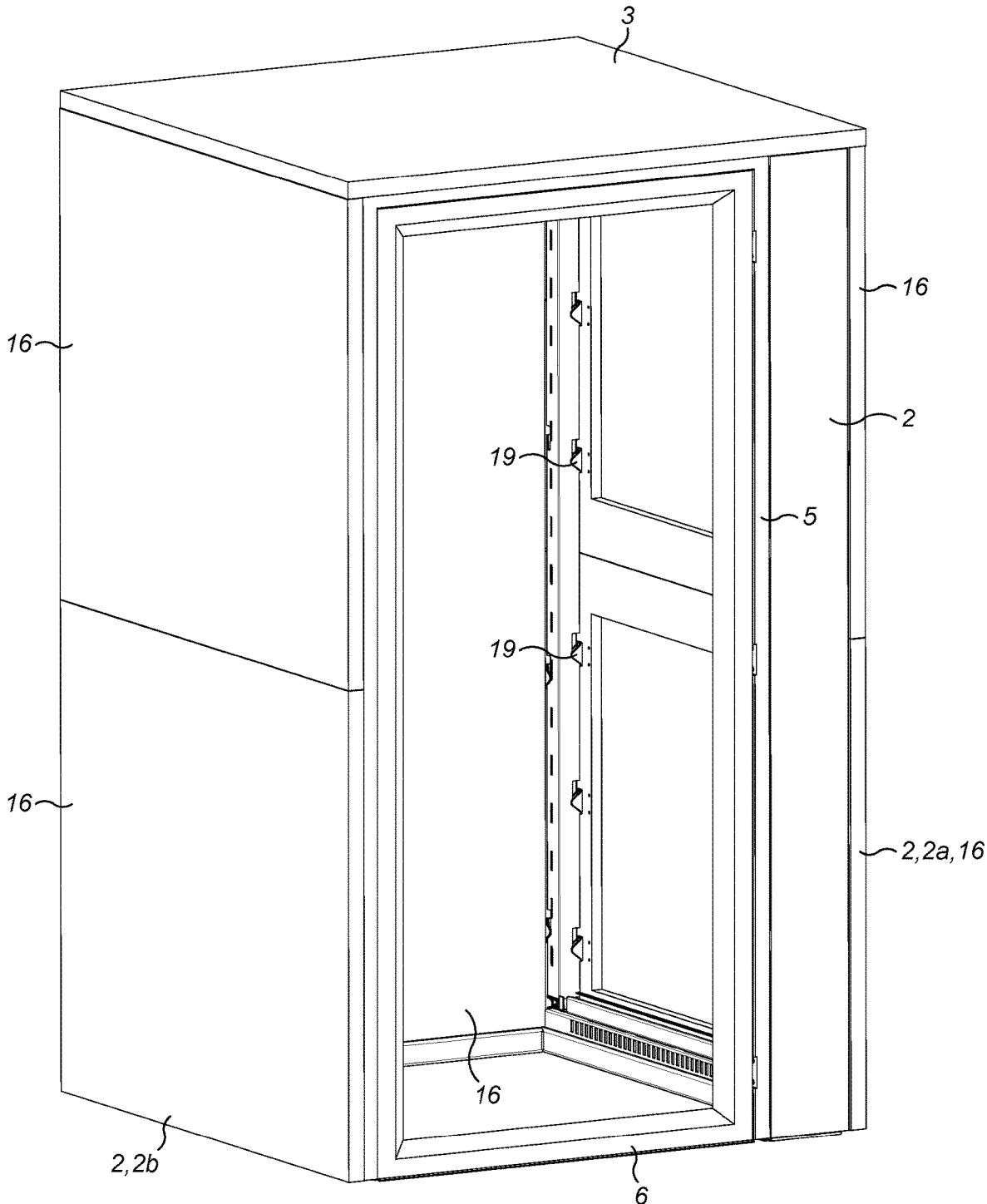


FIG. 1

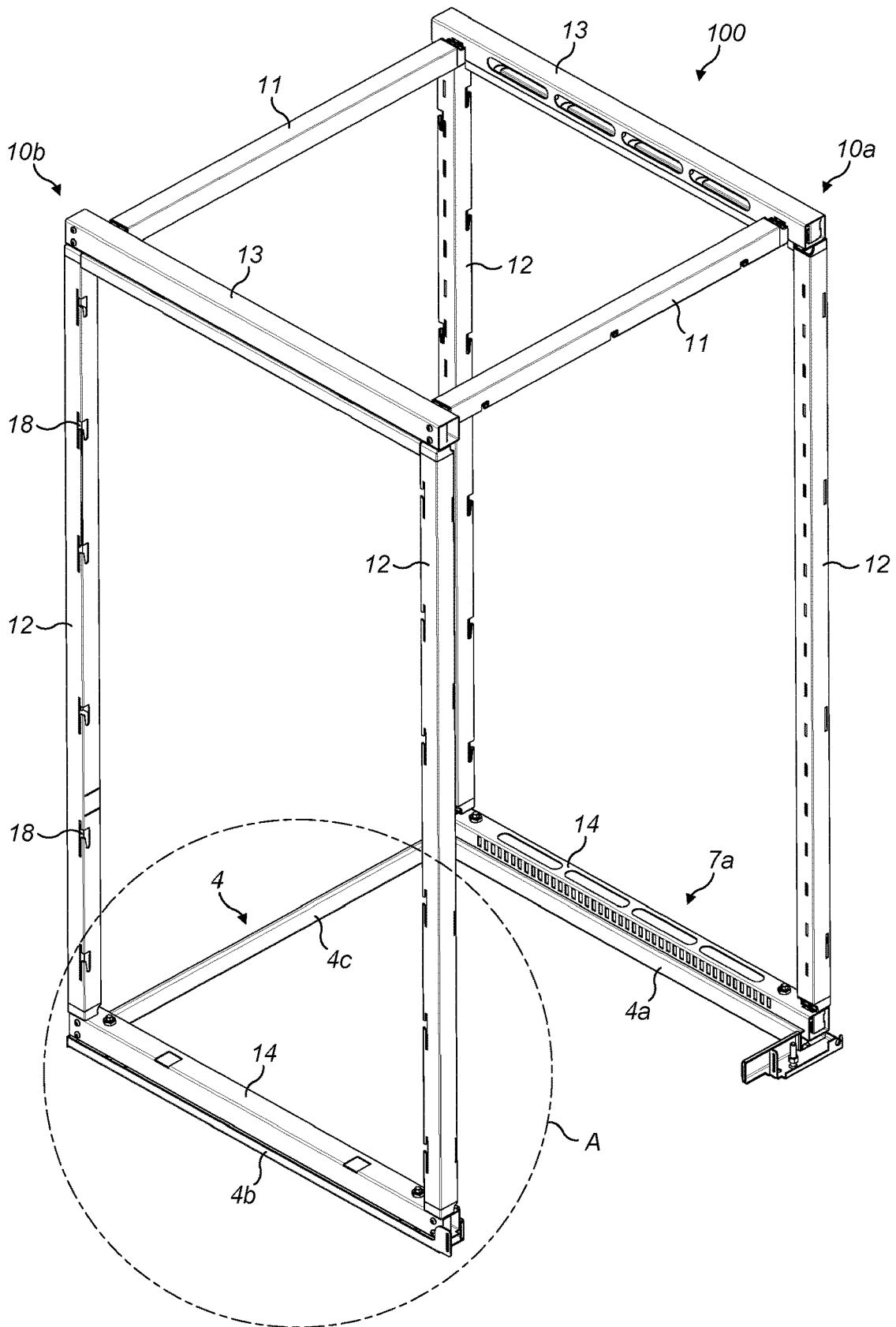


FIG. 2

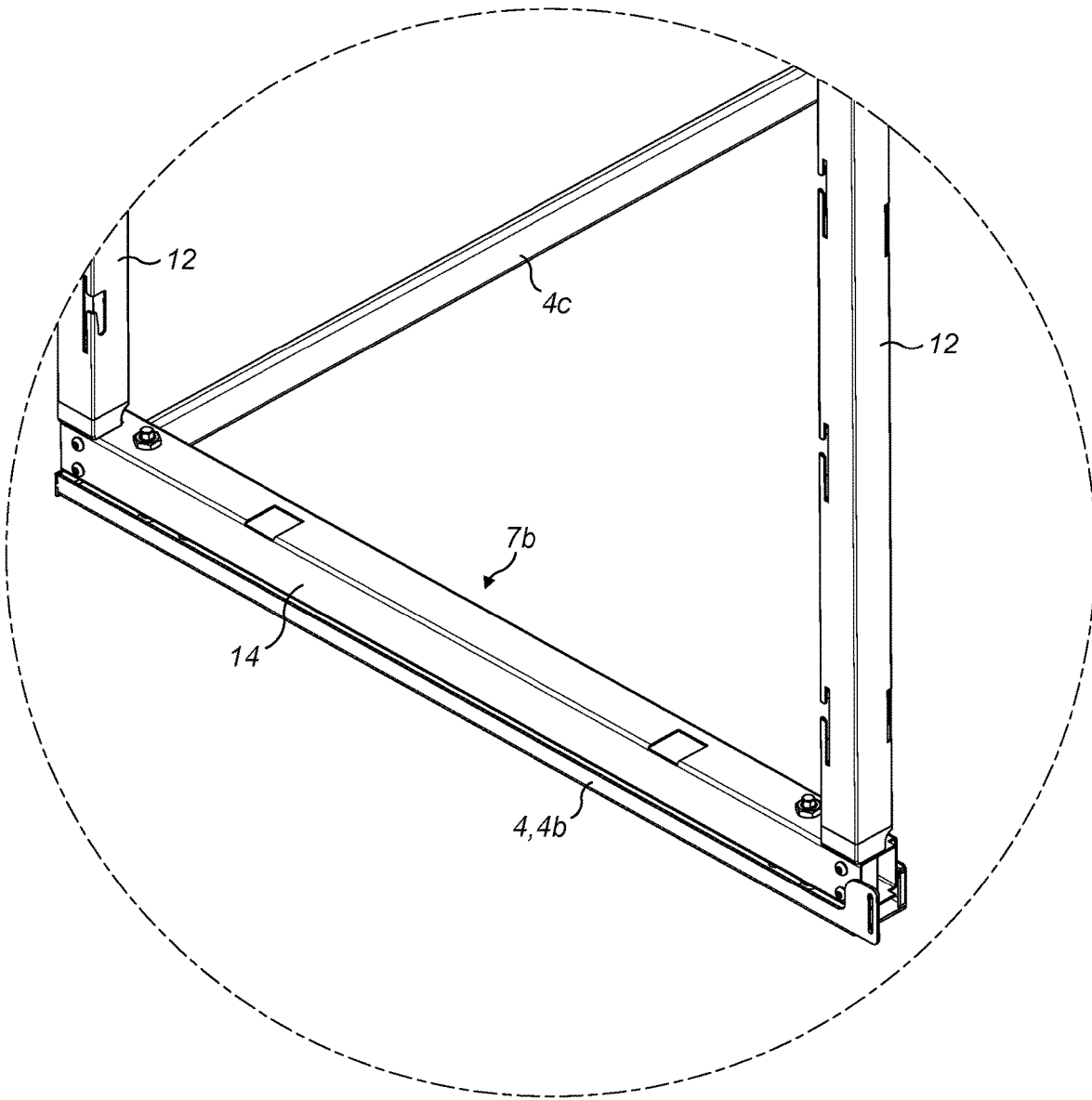


FIG. 3

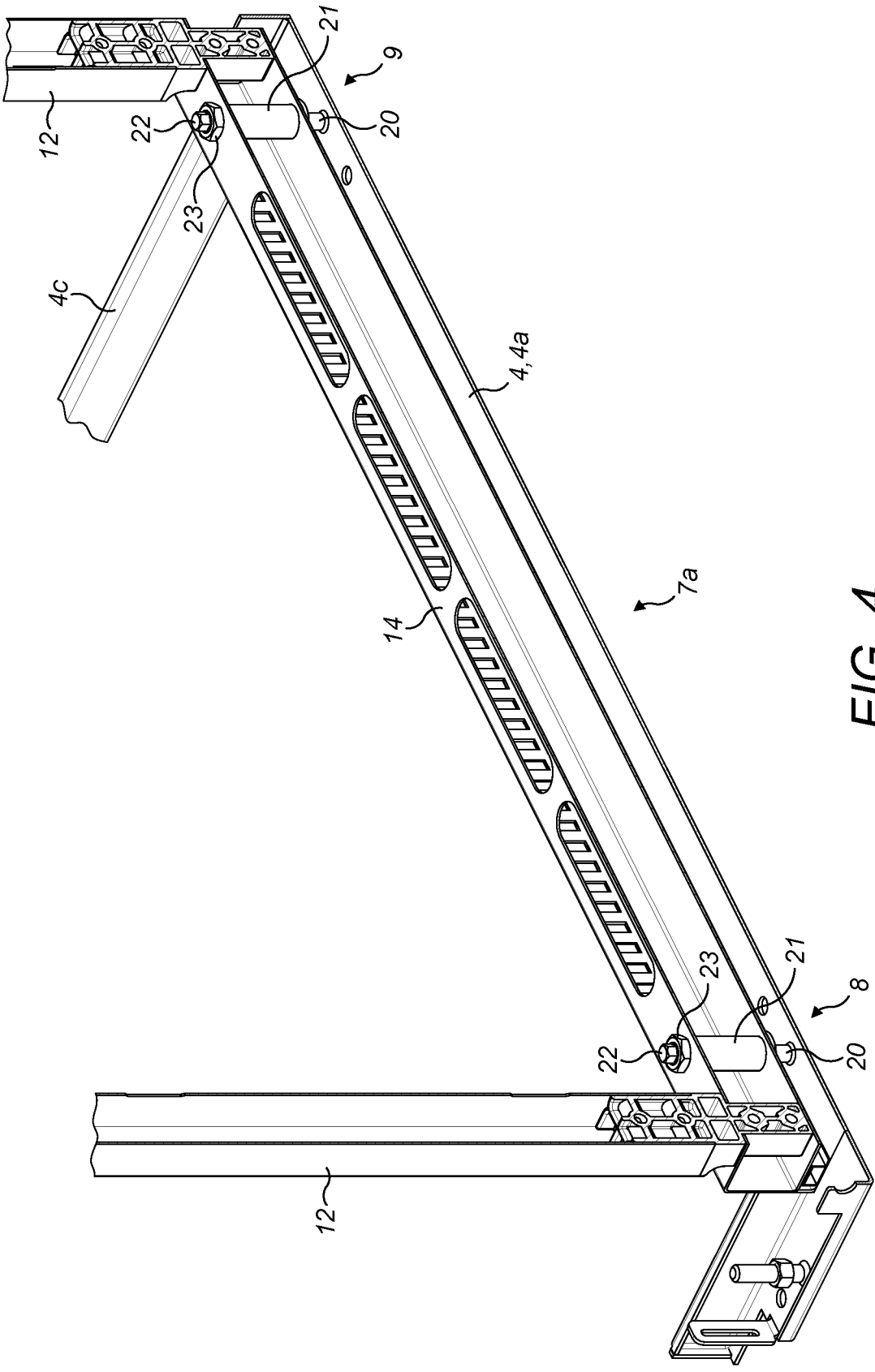


FIG. 4

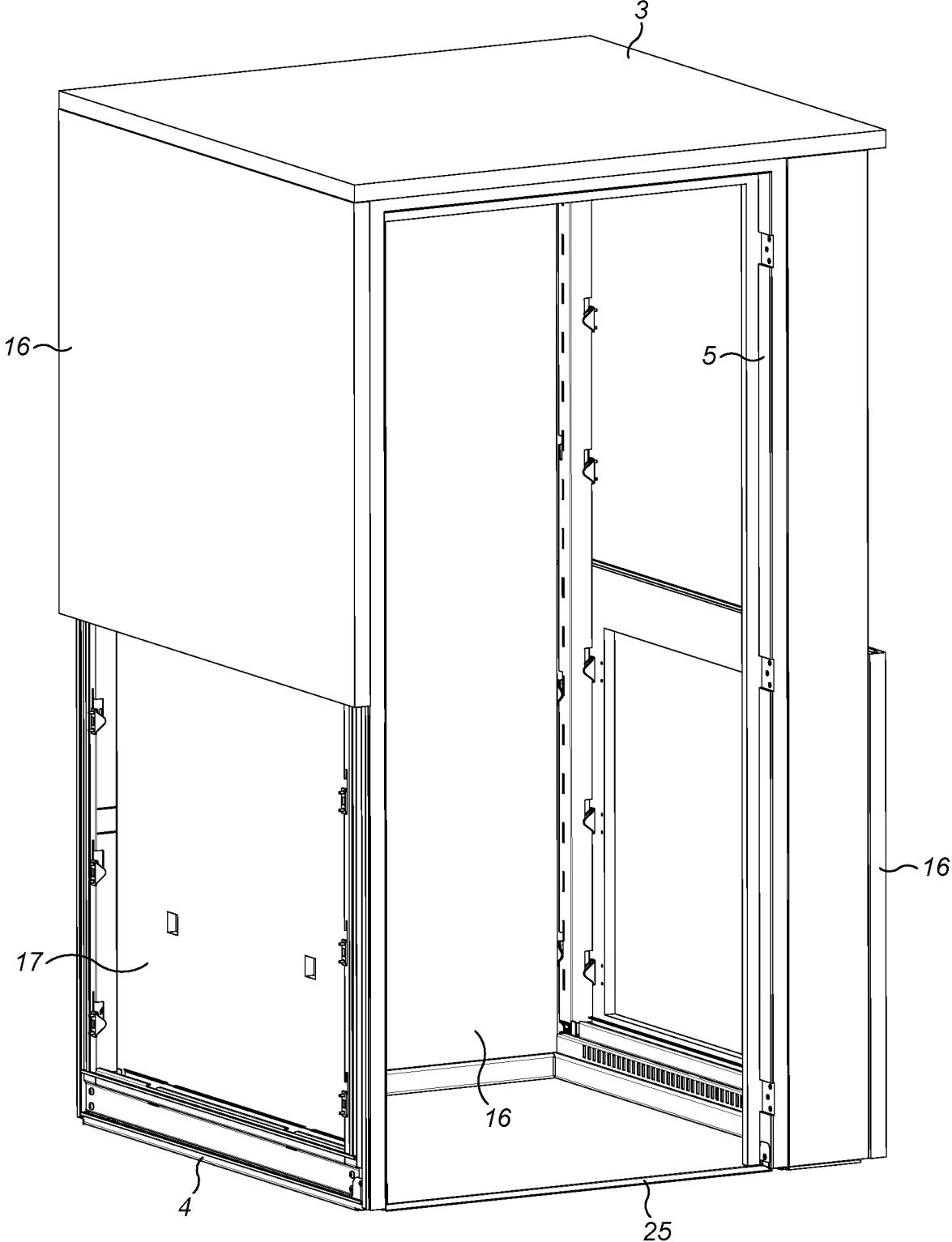


FIG. 5

## A BOOTH

[0001] The present invention relates to a booth, in particular to an adaptable booth assembly which provides a zero threshold entry (or nominal threshold entry) rendering it accessible by all.

[0002] Open plan working environments, such as office spaces, provide many advantages including the efficient use of available space and the promotion of interaction between workers using the space. However, such open plan environments suffer drawbacks where, for example, workers require a quiet space in which to concentrate on work, conduct meetings or make telephone calls.

[0003] To address this issue, some open plan office spaces are provided with a limited number of isolated offices or meetings rooms, which can be used by workers when a quieter or more private environment is required. Such isolated spaces are typically built into the permanent structure of the office space, and are commonly located at or towards the periphery of the office space for convenience.

[0004] A disadvantage of this arrangement is that such isolated spaces are generally inflexible and immobile and thus cannot be easily adapted in response to the changing requirements of the users of the office space. For example, an organisation owning or renting an office space may experience fluctuations in the number of workers using the office space, and thus the number of isolated spaces required may vary over time. Similarly, the occupants of a rented office space may change on a regular or semi-regular basis, with different occupants having different requirements in terms of the number or nature of isolated spaces within the office space.

[0005] To address these issues the use of freestanding soundproofed booths which can be readily re-located, and which provide a convenient isolated space for a worker in an open plan office environment, are becoming more popular.

[0006] The present invention arose in an attempt to provide an adaptable booth which can provide a convenient isolated space for a worker in an open plan office environment and provide a zero threshold entry (or nominal threshold entry) rendering it accessible by all.

[0007] According to the present invention in a first aspect there is provided a freestanding booth comprising a plurality of upstanding peripheral walls, a roof and a base upon which the booth stands in use, one of the walls defining an opening that is closed by a door, wherein the base extends along a basal edge of a plurality of the walls but does not extend across the opening.

[0008] By the provision of a base to which the walls are mounted, a stable construction may be provided. The booth may, however, be broken down to a compact form for storage or transportation. By provision of a base that does not extend across the opening, it is possible to provide a zero threshold entry to allow access for all.

[0009] The booth is preferably soundproof.

[0010] According to the present invention in a second aspect there is provided a freestanding booth comprising upstanding peripheral walls, a roof and a base upon which the booth stands in use, one of the walls defining an opening that is closed by a door, wherein the base extends along a basal edge of a first of the walls, the first wall being fixed to the base via a first levelling assembly, the first levelling assembly comprising a first height adjustment mechanism and a second height adjustment mechanism that are spaced apart from one another in a longitudinal direction of the

basal edge of the first wall and are independently adjustable for altering an angle of the basal edge of the first wall relative to the ground.

[0011] The base may be fixed to, or simply placed on, a floor (which may be uneven) and the booth may be built up on the base. By the provision of the levelling assembly, the booth may be suitably levelled to ensure appropriate noise sealing and correct fitment of the door.

[0012] The first and second aspects are preferably combined with one another, although the first aspect may be implemented independently of the second aspect, as discussed in the specific description.

[0013] Further, preferable, features are presented in the dependent claims.

[0014] Non-limiting embodiments of the present invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

[0015] FIG. 1 is a perspective view of a partially assembled booth according to one embodiment of the present invention;

[0016] FIG. 2 is a perspective view of a sub frame of the booth of FIG. 1;

[0017] FIG. 3 is a close up view of detail A in FIG. 2;

[0018] FIG. 4 is a partially cutaway perspective view showing the mounting of a wall frame to the base via a levelling mechanism; and

[0019] FIG. 5 is a perspective view showing the booth of FIG. 1 partially disassembled by removal of wall panels.

[0020] With reference to FIG. 1, there is shown a freestanding booth 1 according to an embodiment of the present invention. The booth 1 is shown in a partially constructed state with inner panels and the door missing. No furniture is installed.

[0021] The booth comprises upstanding peripheral walls 2, a roof 3 and a base 4 (as seen in FIGS. 2 to 5) upon which the booth stands in use. One of the walls 2 defines an opening 5 that is closed by a door 6. The base 4 extends along a basal edge of a plurality of the walls but does not extend across the opening.

[0022] Whilst in the present arrangement the booth has four walls 2 (and thereby four sides) it could have more or less walls/sides in alternative arrangements. The principals of its construction as discussed in greater detail below will be suitable for constructing booths having numerous forms, including triangular, hexagonal or octagonal booths or otherwise, wherein adjacent sides would be at an oblique angle to one another rather than perpendicular to one another as in the present arrangement. More than this booths could be constructed with curved walls.

[0023] Furthermore, whilst the booth is constructed by attaching panels to a sub frame, as discussed below, it should be appreciated that the present invention is applicable to booths that have alternative structures, such as booths formed by attaching complete composite or laminate panels to a base. In such cases, it will not be a frame member that is fixed to the base but an appropriate portion of the alternative panel structure.

[0024] Moreover, bases could be provided, which are not only provided at the periphery of the booth, in contrast to the arrangement shown.

[0025] The present invention is not to be limited to the specific structure detailed.

[0026] The base 4 extends along (and under) the basal edge of three of the four walls 2, as best seen in FIGS. 2 and

5. It does not extend along the basal edge of the wall 2 that defines the opening 5 that is closed by the door 6. It is, accordingly, substantially U-shaped. The base 4 comprises a plurality of elongate sections 4a, 4b, 4c that are connected to one another. With straight walls, the elongate sections 4a, 4b, 4c are straight. Where curved walls are provided instead then the elongate sections may be correspondingly curved. Adjacent elongate sections in the present arrangement are arranged at a right angle to one another.

[0027] Where adjacent walls are arranged at angles other than right angles to one another then the angles between adjacent sections 4a, 4b, 4c may also be adapted accordingly.

[0028] The base 4 is provided at the periphery of the booth only, as clearly seen.

[0029] In alternative arrangements, this need not be the case. For example, there could be an arrangement where the base was otherwise constructed to extend across at least a proportion of the internal floor surface of the booth. The booth 1 preferably comprises no floor. However, arrangements will be possible that include a floor covering, such as a carpet or similar within the booth 1.

[0030] As seen in FIG. 5, which shows a partially disassembled booth that has had the door 6 removed, a removably attachable threshold member 25 may be provided, which, in use, extends across the opening 5 and along/under a basal edge of the door 6 when the door is in a closed position, the threshold member 25 is attachable to the base 4 at its ends.

[0031] In situations where the base 4 is fixed to a floor, as will be required in regions prone to tectonic activity, or otherwise, the threshold member 25 may be omitted. When the base is not fixed to the floor, the threshold member 25 may be used to prevent any twisting of the structure of the booth during use. Also, even when the base is fixed to the floor, the threshold member may be used, when the booth is in general use and when the booth is moved in an assembled state or only when the booth is moved in an assembled state. Notably, its attachment will prevent twisting of the assembled booth during moving.

[0032] As may be seen, the threshold member is elongate. It preferably has a very low profile to avoid causing any issue for wheelchair users or otherwise. It may have a maximum vertical height, in use, of 15 or less, more preferably 10 mm or less. It may be rotatable about its longitudinal axis for fixing in different orientations. It may take the form of an upturned V in cross-section, wherein it may be angled to overlap a floor covering within the booth (when present) and to slope down outwardly in the direction of the door to hold the edge of the floor covering in place and obviate any tripping risk from the floor covering.

[0033] The door is preferably provided with a drop down seal of conventional form that retracts as the door is opened under the force of a spring or otherwise and drops down as the door is shut.

[0034] The elongate sections 4a and 4b of the base 4, which extend along the basal edges of the first and second walls 2a and 2b respectively are formed as U-shaped channels. They are square U-shaped channels in the present arrangement. The U-shaped channels may be provided with sound absorbing material therein. The elongate section 4c that extends between the elongate sections 4a and 4b is not a U-shaped channel but could be in alternative arrangements. In line with the discussion above, in alternative forms

of booth there could be more or less U-shaped channels. Moreover, the elongate sections could take numerous alternative forms.

[0035] To allow for suitable soundproofing, the base will preferably be provided with sound absorbing material (not shown) on a lower surface that is sandwiched between the base and the floor during use. Additionally or alternatively, the base may comprise sound absorbing material (not shown) on an upper surface of the base, the sound absorbing material being sandwiched between the base and the walls. The sound absorbing material is preferably a suitable foam.

[0036] The base 4 may be unitarily formed or, more preferably, formed from separate elongate sections that are joined to one another. By such arrangement, the base may be broken down for storage and transport. Moreover, improved modularity will be possible to allow the construction of booths of different sizes or to interconnect adjacent booths using common elongate sections or otherwise. In one non-limiting example elongate sections 4a and 4b could be extended to increase the size of the booth.

[0037] The base 4 extends along a basal edge of a first of the walls 2a, the first wall 2a being fixed to the base 4 via a first levelling assembly 7a (as seen in FIG. 4). The first levelling assembly 7a comprises a first height adjustment mechanism 8 and a second height adjustment mechanism 9 that are spaced apart from one another in a longitudinal direction of the basal edge of the first wall and are independently adjustable for altering an angle of the basal edge of the first wall 2a relative to the ground.

[0038] As is preferred, in the present arrangement the base 4 extends along a basal edge of a second of the walls 2b and the second wall 2b is fixed to the base 4 via a second levelling assembly 7b. The second levelling assembly 7b is preferably of identical construction to the first levelling assembly 7a again comprising a first height adjustment mechanism 8 and a second height adjustment mechanism 9 that are spaced apart from one another in a longitudinal direction of the basal edge of the second wall 2b and are independently adjustable for altering an angle of the basal edge of the second wall 2b relative to the ground. In alternative arrangements the second levelling mechanism could take an alternative form.

[0039] The first and second walls 2a and 2b that are provided with the levelling assemblies 7a, 7b are opposed to one another in the present arrangement although this need not be the case and will be dependent on the shape of the booth and its configuration.

[0040] In alternative arrangements, the first and/or second levelling assembly may be omitted.

[0041] As best seen in FIG. 2, the booth comprises a sub frame 100. The sub frame 100 is fixed to the base 4. Panels and other structural elements or fixtures may be attached to the sub frame 100. The sub frame 100 comprises frames 10a and 10b. The frames 10a and 10b are joined to one another by cross members 11 to form the sub frame 100. The frames 10a and 10b themselves comprise vertical frame members 12, upper horizontal frame members 13 and basal frame members 14. The first and second walls 2a, 2b comprise the frames 10a and 10b respectively.

[0042] It should be appreciated that the present invention is not limited to the exemplary frame structure as shown. Numerous alternative frame arrangements will be readily appreciated by those skilled in the art. Whilst two of the walls are shown to comprise frames, which is preferred in

the present arrangement, there may be arrangements with more or less frames, particularly where the booth has more or less sides, as discussed.

**[0043]** The walls **2** further comprise panels **16** that are attached to the frames **10a**, **10b** (and thereby to the sub frame **100**). The roof **3** is formed by the attachment of additional panels.

**[0044]** The panels **16** preferably comprise inner and outer panels, wherein any or all of the walls **2** may comprise at least one inner panel and at least one outer panel which oppose one another and comprise respective inner and outer faces of the respective wall **2**. The inner and outer panels are preferably mounted to the vertical frame members **12**, as shown, wherein the vertical frame members comprises either a plurality of vertically spaced lugs or a plurality of vertically spaced hooks that are provided between the inner and outer panels, wherein the inner and/or outer panels each comprise a corresponding plurality of the other of the vertically spaced hooks or lugs, and the lugs and hooks engage with one another to support the first and/or second panels on the support element. In the present arrangement, the vertical frame members are provided with the hooks **18** and the inner and outer panels are provided with the lugs **19**.

**[0045]** The lugs **19** are preferably formed by brackets, as shown. The hooks are preferably formed by cut-outs **18** in the vertical frame members **12**. The cut-outs may each comprise a slot, which has a width that varies along its length. The slots may be generally L-shaped and extend horizontally for a distance from an open mouth before travelling vertically down to a closed end. The slots may each be tapered to reduce in width between the open mouth of the slot and the closed end of the slot. The closed end of each slot may be curved with a diameter that is substantially equal to the diameter of a cylindrical rod (defining lug **19**) of the respective bracket that is received thereby.

**[0046]** It should be appreciated that numerous other means of fixing panels to the sub frame will be possible, as will be readily appreciated by those skilled in the art. The present invention is not to be limited in this regard.

**[0047]** The panels **16** may take any suitable form. They will preferably have sufficient rigidity to prevent sagging. The inner panels may comprise padded fabric panels to provide for acoustic damping. The outer panels may be rigid panels and could be formed from wood, plastic or otherwise. The inner and outer panels could be formed from the same materials or from different materials. There may be sound proofing panels **17** provided between the inner and outer panels. These may be included or omitted in dependence on the acoustic properties of the inner and outer panels.

**[0048]** The walls **2** may comprise multiple smaller inner and outer panels or a single inner panel and a single outer panel. The use of multiple smaller panels is preferable to allow for more compact transportation or storage when the booth is dismantled. In the present arrangement, as clearly seen in FIG. **1**, the first and second walls **2a**, **2b** each comprise a pair of outer panels.

**[0049]** An acoustic seal of any suitable form preferably extends along the basal edge of each of a plurality of the walls **2**. The acoustic seal may extend around substantially the entire periphery of the base **4**. It may extend continuously around the periphery of the base. In the present arrangement with the base being substantially U-shaped, the acoustic seal extends continuously around three basal edges of the booth. The acoustic seal preferably extends along the

basal edge of the side with the door **6** on either side of the door as far as the door opening. As discussed, the door is preferably provided with a drop down seal (not shown) of conventional form that retracts as the door is opened under the force of a spring or otherwise and drops down as the door is shut. It may otherwise be provided with an alternative form of seal. With a seal under the door there is provided an unbroken basal peripheral seal (around the entire periphery of the booth). The door/opening is/are preferably further provided with suitable sealing such that the opening is sealed by the door when closed. The outer panels, including the outer panel(s) of the walls and roof are preferably sealed with one another, such that when the door is shut a sealed volume is defined. A suitable ventilation system may be provided to allow for suitable airflow/cooling during use.

**[0050]** The basal frame members **14** define the basal edges of the first and second walls **2a**, **2b** respectively that are fixed to the base **4** via the first and second levelling assembly **7a**, **7b** respectively. The levelling assemblies will be considered in more detail now with reference to FIG. **4**, which shows a partially cutaway view of the first levelling assembly **7a**.

**[0051]** The levelling assembly **7a** comprises the first and second height adjustment mechanisms **8**, **9**, as discussed. The height adjustment mechanisms **8**, **9** are identical to one another although could be different to one another in alternative arrangements. The height adjustment mechanisms **8**, **9** each comprise a first threaded member **20** that is fixed to the base **4**. The first threaded members **20** comprise threaded studs that extend vertically. They could alternatively comprise bolts or otherwise. The first threaded members **20** are each engaged by a respective second threaded member **21** that engages the first threaded member and supports the basal frame member **14** (and thereby the wall **2a**). The second threaded members **21** take the form of internally threaded sleeves but could take any alternative suitable form. They are provided with externally threaded heads **22** that are received through openings in the basal frame member **14** for receive locking nuts **23**. The heads are provided with recesses for receiving an adjustment tool such as a hex driver or similar. With the first and second height adjustment mechanisms independently adjustable, the front and rear ends of the basal frame member **14** may be raised and lowered as desired by rotating the second threaded members **21** to suitably alter the angle of the basal frame member **14** and thereby the basal edge of the wall **2a** relative to the floor. This allows for a levelling of the booth on an uneven floor.

**[0052]** The invention has been described above with reference to specific embodiments, given by way of example only. It will be appreciated that many different arrangements of are possible within the scope of the appended claims.

**1.-24.** (canceled)

**25.** A freestanding booth comprising a plurality of upstanding peripheral walls, a roof and a base upon which the booth stands in use, one of the walls defining an opening that is closed by a door, wherein the base extends along a basal edge of a plurality of the walls but does not extend across the opening.

**26.** A booth as claimed in claim **25**, wherein the base is provided at the periphery of the booth only.

**27.** A booth as claimed in claim **25**, wherein the booth comprises four walls and the base is substantially U-shaped.

**28.** A booth as claimed in claim **25**, wherein a removably attachable threshold member is provided, which, in use,

extends across the opening and along a basal edge of the door when the door is in a closed position, the threshold member being attachable to the base at its ends.

**29.** A booth as claimed in claim **28**, wherein the threshold member is elongate and is rotatable about its longitudinal axis for fixing in different orientations.

**30.** A booth as claimed in claim **28**, wherein the threshold member, in use, takes the form of an upturned V in cross-section.

**31.** A booth as claimed in claim **28**, wherein the threshold member overlaps a floor covering within the booth.

**32.** A booth as claimed in claim **28**, wherein a maximum vertical height of the threshold member, in use, is less than 10 mm.

**33.** A booth as claimed in claim **25**, which comprises no floor.

**34.** A booth as claimed in claim **25**, wherein the base comprises a plurality of elongate sections that are connected to one another, wherein adjacent elongate sections are arranged at an angle to one another.

**35.** A booth as claimed in claim **34**, wherein the base is unitarily formed.

**36.** A booth as claimed in claim **34**, wherein the elongate sections are separately formed and are joined to one another.

**37.** A booth as claimed in claim **25**, wherein one or more of the walls comprises a frame that is fixed to the base and one or more wall panels that are fixed to the frame.

**38.** A booth as claimed in claim **25**, wherein a plurality of the walls comprises frames that are joined together to form a booth sub frame.

**39.** A booth as claimed in claim **37**, wherein each of the one or more walls comprising a frame comprises two or more wall panels that include an inner panel and an outer panel, which oppose one another and comprise respective inner and outer faces of the wall, the frame comprising a vertically extending support element to which the inner

and/or outer panels are mounted, wherein the support element comprises either a plurality of vertically spaced lugs or a plurality of vertically spaced hooks, wherein the inner and/or outer panels each comprise a corresponding plurality of the other of the vertically spaced hooks or lugs, and the lugs and hooks engage with one another to support the first and/or second panels on the support element.

**40.** A booth as claimed in claim **25**, wherein each of the walls and the roof comprises one or more outer panels, there being provided seals between the panels so that the outer panels form a sealed outer structure.

**41.** A booth as claimed in claim **40**, wherein the door comprises a perimeter seal, such that with the door closed there is a sealed volume is defined by the outer panels and the door.

**42.** A booth as claimed in claim **25**, wherein an acoustic seal is provided, which extends around substantially an entire periphery of the base and seals the base to a floor in use.

**43.** A booth as claimed in claim **25**, wherein a seal is provided on a basal edge of the door.

**44.** A booth as claimed in claim **25**, wherein the base comprises sound absorbing material on an upper surface of the base, the sound absorbing material being sandwiched between the base and the walls.

**45.** A booth as claimed in claim **44**, wherein one or more of the walls comprises a frame that is fixed to the base and one or more wall panels that are fixed to the frame, and wherein the sound absorbing material is sandwiched between the frame and the base.

**46.** A booth as claimed in claim **25**, wherein the base is provided with sound absorbing material on a lower surface of the base that is sandwiched between the base and a floor during use.

**47.** A booth as claimed in claim **25**, which is soundproof.

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