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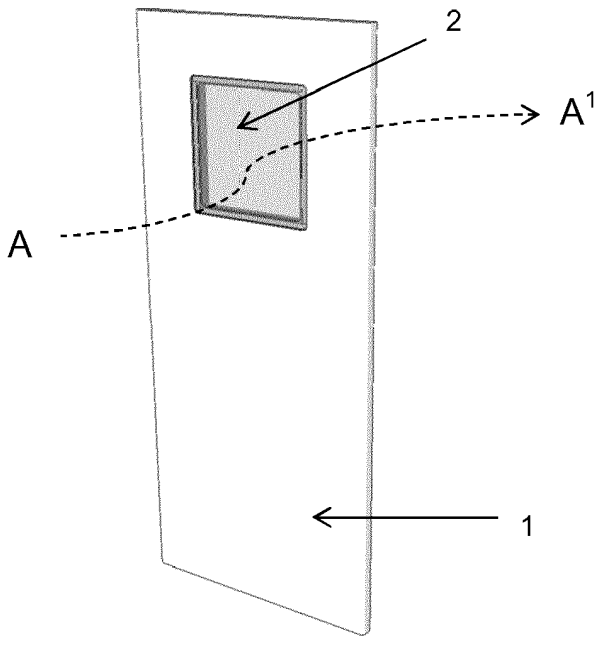
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(54) IMPROVED GLAZING

(57) A glazing unit comprising an observation panel comprising one or more transparent panels attached to a fireglass wherein a border is applied around the perimeter of at least one of the transparent panels, the unit is particularly useful as a panel in a wall or door particularly a wooden steel or aluminium door provided with a hygienic or protective cladding

FIGURE 1



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Description

[0001] The present invention relates to improvements in glazing and in particular to the provision of observation panels in structures such as hygienic building components such as doors and walls that are used in hygienic or sterile environments. There is a need to provide observation panels to enable inspection of facilities such as a controlled environment situation such as in a research facility or in industrial plants such as in chemical, pharmaceutical and food production or in medical facilities such as hospital, operating theatres or care homes to be viewed without entering the facility.

[0002] These observation facilities are typically provided by providing an observation panel in a wall or a door. In such sensitive environments the wall or door is subject to a variety of health and safety requirements. For example, the wall or door may need to be clad with hygienically approved or protection materials which are readily cleaned and sterilized and the wall or door including the observation panel must be in accordance with certain safety particularly fire regulations.

[0003] Walls and doors with observation panels that satisfy these requirements are available. However the assembly process is multistage and is time consuming and costly. Additionally the manual precision required for assembly relies on the skills of the operator and can at times lead to unsightly imperfections in the assembled article, and can restrict the ability to achieve certain fire ratings.

[0004] It is important that any observation panel that is provided be flush with the surface of the wall or door to avoid ledges upon which dust, dirt, germs and the like can accumulate.

[0005] Current constructions consist of a wooden door or panel provided with a hygienic cladding such as a polyvinyl chloride sheet moulded onto the wooden door. The observation panel is provided by cutting a hole in the wooden door or panel to the shape of the observation panel and positioning a wooden bead on the cut edge for receipt of a fireglass panel. Subsequently transparent protective facing panels may be adhered to the frame. These transparent layers typically consist of (transparent) acrylic layers which are then placed into the hole either side of the fireglass and held in position by means of an adhesive. Pressure is then applied to effect a strong bond.

[0006] The present invention therefore provides an improved article of construction containing an observation panel and an improved, simplified method for the manufacture of such an article.

[0007] In one embodiment the invention also provides an improved method for the identification of a room such as a personal room in a care home.

[0008] The present invention therefore provides a glazing unit comprising an observation panel comprising one or more transparent panels attached to a fireglass glazing bead wherein a border is applied around the perimeter of at least one of the transparent panels.

[0009] In a preferred embodiment the glazing unit comprises two transparent panels with a fireglass layer interposed between the transparent panels and the border is applied to one or both of the transparent panels.

[0010] The invention further provides a wall or door containing such a glazing unit and in particular a hygienic wall or door typically a wooden, steel or aluminium door further provided with a hygienic or protective cladding such as polyvinyl chloride. The glazing unit may be provided in an aperture in the wall or door before or after the wall or door is provided with the hygienic cladding. It is preferred to provide the glazing unit after the provision of the cladding which provides a simpler assembly process employing fewer stages in assembly and more complete covering of the wooden wall or door blank.

[0011] The border around the transparent panel could be provided on the side of the glazing panel that is exterior to the room or space to which visual access is being provided. In this way the border can provide a dirt proof and hygienic seal around the perimeter of the glazing panel. Additionally the border can provide an aesthetically pleasing appearance to the wall or door obscuring the jointing features for securing the fireglass and the transparent panel(s). In a further embodiment the border can be coloured to designate the room, for instance to identify the floor of the building by colour or to indicate to the occupant of a room that it is their room. This can be particularly useful in care homes where some occupants can recognise colours better than they can recognise numbers or names.

[0012] The preferred process for the manufacture of a wall panel or door provided with a glazing unit of this invention is as follows. An aperture is cut in an encapsulated blank of the wall panel or door. The encapsulated blank preferably comprises a wooden panel totally surrounded by a hygienic cladding and/or protection material typically polyvinyl chloride. Beads and the necessary fire seals are then provided within the aperture lying flush with one side of the door blank. The fireglass panel is then inserted in the aperture against the beads and second beads are then provided at the other side of the aperture on the other side of the fireglass panel so that the fireglass is securely held in place. The transparent panel or panels are then cut to have a slightly larger surface area than that of the aperture. The border is then applied around the perimeter of the transparent panel, a rebate is provided in the wall or door blank which is concentric with the aperture for receipt of the transparent glazing panel provided with the border. An adhesive may then be provided on the face of the rebate so that the transparent panel can be inserted and pressed down into the rebate so that it lies flush with the face of the cladding material and adheres thereto and provides the observation panel in the wall or door. In this way the wood (or other material) of the door is totally enclosed by the cladding, the border material and the glazing unit.

[0013] Where a further transparent panel is to be pro-

vided on the other (interior) side of the wall or door it may be provided by a similar process of providing a rebate with an adhesive thereon and pressing the transparent panel onto the adhesive. In this instance it is optional that the transparent material be provided with a border.

[0014] The wall or door blank used in this invention may be any of the conventionally used materials, typically wood. Similarly the hygienic cladding or door protection material may be any of the conventionally used materials typically polyvinyl chloride. Additionally the fireglass material when used may be standard fireglass materials and as the laminate FD30, FD60 and FD90 materials. Likewise the transparent panel or panels may be of conventional materials such as transparent polyacrylic materials such as Perspex.

[0015] The border may be of any material. However, the border may be a strip of material such as a vinyl strip or it may be a painted layer and will be selected according to the environment in which the wall or door is to be used and the use envisaged for the border. The preferred width of the border will also depend upon the use. It should however be wide enough to cover the face of the beads provided for location of the fireglass unit and the adhesive used to secure the glazing unit in place.

[0016] The invention is particularly useful in the production of observation panels in walls and doors employed in medical environments such as hospitals, operating theatres and care homes. Additionally it is useful in industrial facilities which require external observation such as hygienic and sterile units used in food, chemical and pharmaceutical manufacture and in associated research and development facilities.

[0017] The invention is illustrated but in no way limited by the accompanying drawings in which

Figure 1 shows a door containing a glazing unit according to the present invention.

Figure 2 is an enlarged view of the glazing panel in the door of Figure 1.

Figure 3 is a cross section through the line A-A^1 of Figure 1 showing the various layers of the glazing unit that is provided in the door shown in Figure 1.

[0018] Figure 1 shows a door (1) provided with a glazing panel (2) which is shown in the enlarged view of Figure 2 to have a border (3) surrounding the transparent panel. Figure 3 is a cross section along A-A^1 of Figure 1 showing the door (4) provided with the aperture (5) for the glazing panel. The aperture is provided with beads (6), which retain a fireglass panel (7) to which transparent panels (8) are adhered. The interior surface of the exterior transparent panel (8) is provided with a border as shown in Figure 2.

Claims

1. A glazing unit comprising an observation panel comprising one or more transparent panels attached to a fireglass wherein a border is applied around the perimeter of at least one of the transparent panels.

2. A glazing unit according to Claim 1 comprising two transparent panels with a fireglass layer interposed between the transparent panels and the border is applied to one or both of the transparent panels

3. A wall or door containing a glazing unit according to Claim 1 or Claim 2.

4. A wall or door according to Claim 3 comprising a wooden steel or aluminium door provided with a hygienic or protective cladding.

5. A wall or door according to Claim 3 or Claim 4 wherein the glazing unit is provided in the wall or door after the provision of the hygienic or protective cladding.

6. A wall or door according to any of Claims 3 to 5 wherein the border around the transparent panel is provided on the side of the glazing panel that is exterior to the room or space to which visual access is being provided.

7. A wall or door according to Claim 6 in which the border is coloured to designate the room.

8. A wall or door according to any of the preceding claims in which the border is a strip of material.

9. A door according to any of Claims 1 to 7 in which the border is a painted layer.

10. A process for the manufacture of a wall panel or door provided with a glazing unit wherein an aperture is cut in an encapsulated blank of the wall panel or door, beads are provided within the aperture lying flush with one side of the door blank, a fireglass panel is inserted in the aperture against the beads and second beads on the other side of the fireglass panel, a rebate is provided in the wall or door blank which is concentric with the aperture for receipt of a glazing panel provided with a border material, an adhesive is provided on the face of the rebate and the glazing panel inserted and pressed down onto the rebate so that it adheres thereto.

11. A process according to Claim 10 in which the door or wall is of wood and the hygienic cladding or door protection material is polyvinyl chloride.

FIGURE 1

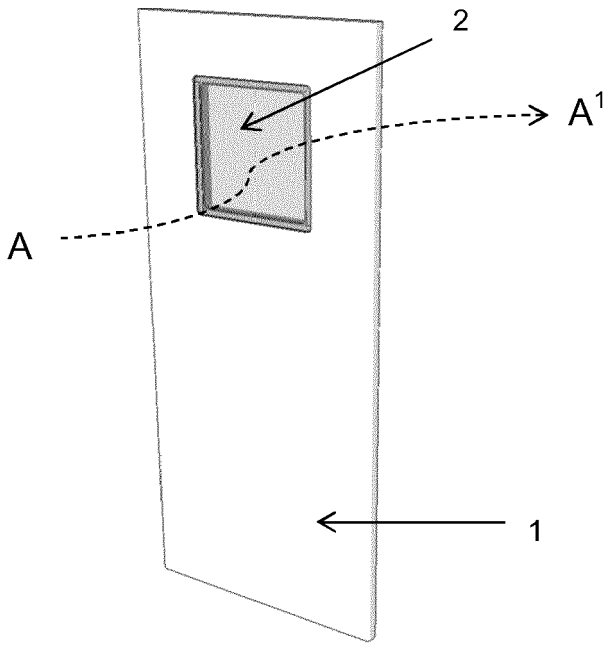


FIGURE 2

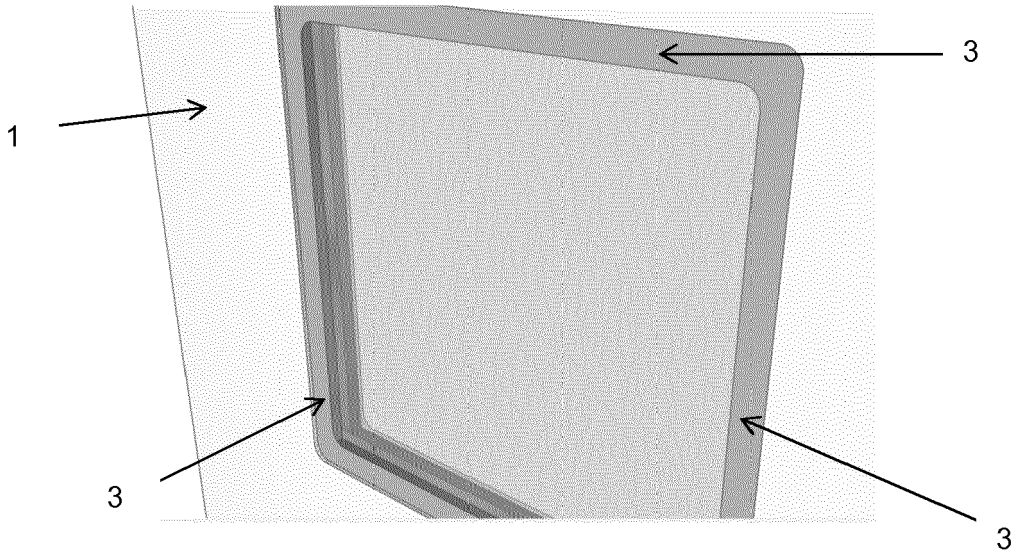
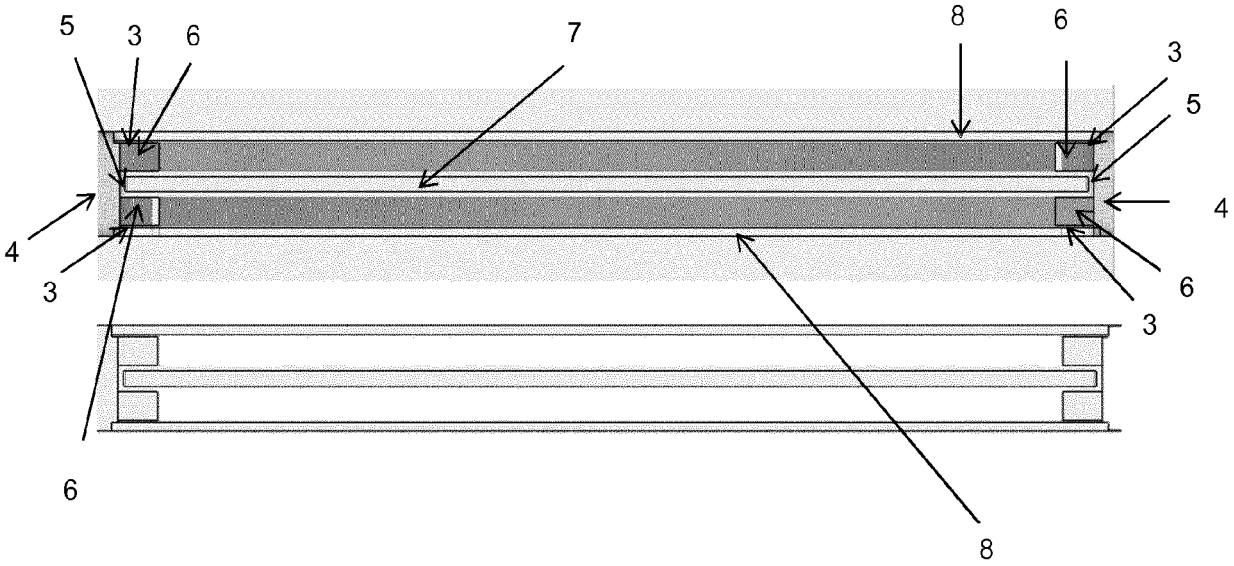


FIGURE 3



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EUROPEAN SEARCH REPORT

Application Number
EP 16 16 2197

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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TECHNICAL FIELDS SEARCHED (IPC)

E06B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	12 August 2016	Jülich, Saskia

CATEGORY OF CITED DOCUMENTS

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82