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(54) **METHOD FOR MOUNTING A DOOR AND DOOR SO MOUNTED**

(57) A furniture item (20) is described comprising:
a door (20) adapted to conceal or clear a passage opening (12) in a wall (10) between two rooms,

one side of the door being hinged to the furniture item so that the door can rotate concealing or clearing the passage opening present at the side of the furniture item .

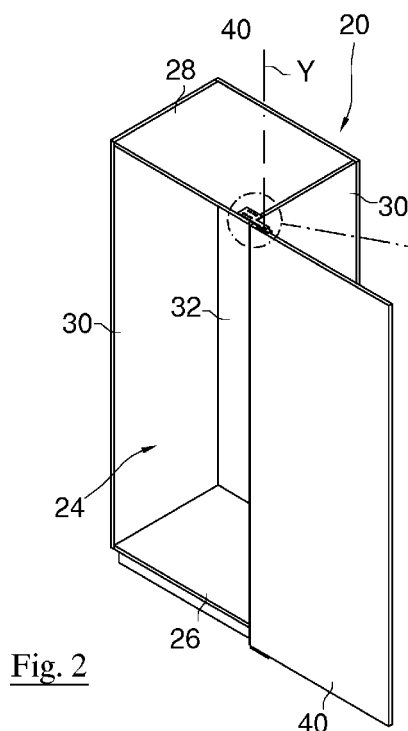


Fig. 2

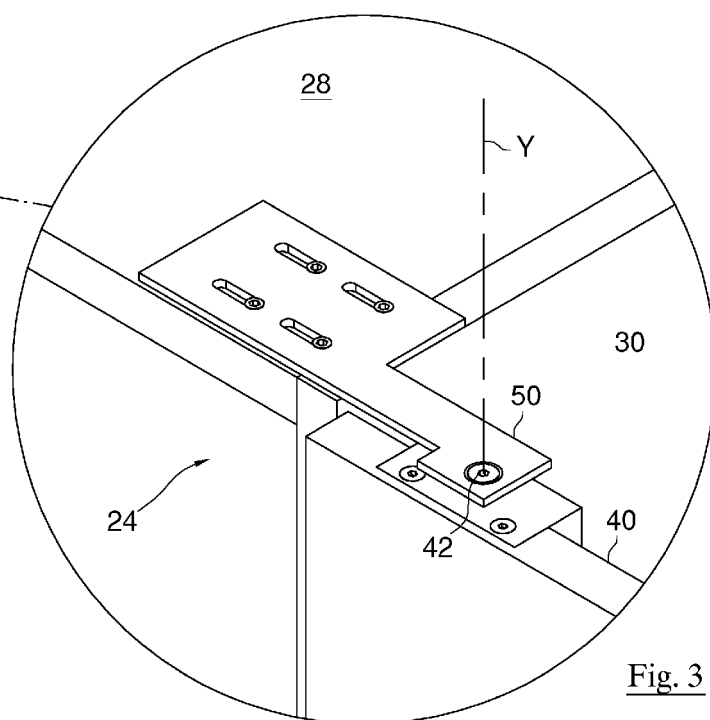


Fig. 3

Description

[0001] The present invention relates to a method of mounting a door, and to a furniture item comprising a door so mounted.

[0002] A recent design trend is to cover doors hinged to walls from view if they interrupt the composition of the furniture. This is especially the case during renovations. The door fits aesthetically poorly into the overall look of the furniture next to the door, so people choose to "cover" it with a fake door that is, however, aesthetically compatible with the furniture.

[0003] To install the fake door, nowadays a post was installed in front of the wall door fixing it to the floor and ceiling. The fake door was then hinged to the post, while having only one opening direction. Although effective, this mounting technique is laborious and inconvenient, and is invasive because it involves a permanent anchoring to the floor and ceiling.

[0004] It is the object of the present invention to improve this state of the art, in particular to provide a new mounting method for the aforementioned fake door, and a fake door of the aforementioned type which is easier to install.

[0005] A mounting method is then proposed for a door concealing a passage opening in a wall between two rooms, the door being detached from the wall, wherein

the door is hinged on a furniture item that is arranged up against the wall and at one side of the opening,

one side of the door being hinged cantilevered to the furniture item so that the door can rotate concealing (wholly or partly), or clearing, the passage opening.

[0006] In this way the door is easy to assemble, especially for the furniture-mounting staff, does not require drilling holes in the walls and can also be attached to an existing furniture item. In addition, with this system the door can also rotate on the hinge by at least 180 degrees.

[0007] As a preferred variant, the door is hinged to a column furniture item, i.e. a furniture item having a height comparable to that of the door and/or the opening in the wall. Thus, a door as large as the passageway can be securely hinged to the furniture item.

[0008] As a first preferred variant, the door is hinged flush with the furniture item, such that the lying plane of the door, when the latter is parallel to the wall, is substantially coplanar to an imaginary plane passing through the front edges of the furniture item (the imaginary plane is parallel to the wall and offset from it). Thus, the door does not spoil the visual continuity of the furniture item and edges are avoided.

[0009] In the first aforementioned variant, preferably there is a first and second furniture item, e.g. column furniture items, on opposite sides of the opening, wherein the first furniture item has the hinged door as defined above and the free end of the door touches or grazes the

second furniture item when the door is parallel to the plane of the wall.

[0010] As a second preferred variant, the door is hinged flush with the furniture item, such that the lying plane of the door, when it is parallel to the wall, is substantially coplanar with an imaginary plane passing through the rear wall of the furniture item.

[0011] The second variant does not necessarily need the second furniture item.

[0012] As a preferred variant, the door is mounted hinged about an axis which is vertical and external to the furniture item, to facilitate a rotation of the door even beyond 180 degrees.

[0013] As a preferred variant, the door is made temporarily blockable in at least one angular position. More preferably, the door is made temporarily blockable in three angular positions, set at 90 degrees apart from each other. This solution avoids mechanical stops for the door, which could complicate the structure or aesthetically spoil the furniture item.

[0014] Another aspect of the invention relates to a furniture item comprising.

a door adapted to conceal or clear a passage opening in a wall between two rooms,

one side of the door being hinged to the furniture item so that the door can rotate concealing or clearing the passage opening next to the furniture item.

[0015] As a preferred variant, the furniture item is a column furniture item.

[0016] As a first preferred variant, the door is hinged flush with the furniture item, such that the lying plane of the door, when the latter is parallel to the wall, is substantially coplanar with an imaginary plane passing through the front edges of the furniture item (the imaginary plane is parallel to the wall and offset from it).

[0017] In the first preferred variant, the furniture item preferably comprises a first and second furniture item, e.g. column furniture items, arranged on opposite sides of the opening, wherein the first furniture item has the door hinged as defined above and the free end of the door touches or grazes the second furniture item when the door is parallel to the plane of the wall.

[0018] In a second preferred variant, the door is hinged flush with the (first) furniture item, such that the lying plane of the door, when the latter is parallel to the wall, is substantially coplanar with an imaginary plane passing through the rear wall of the furniture item.

[0019] The second variant of furniture item does not necessarily need the second furniture item.

[0020] As a preferred variant, the door is hinged about an axis that is vertical and external to the furniture item. In particular, the furniture item comprises two rigid spacer supports that are - in use - attached to the furniture item aligned along a vertical axis, each support extending cantilevered from the furniture item in a horizontal direction

and supporting a hinge for the door. Preferably, each support extends cantilevered from the furniture item in a direction parallel to the wall (or, which is the same, parallel to a back wall of the furniture item).

[0021] As a preferred variant, the door comprises means or a device for making the door temporarily blockable in at least one angular position. More preferably, said means or device are means or a device for making the door temporarily blockable in three angular positions, set at 90 degrees apart from each other. Thus, the door can be comfortably moved even with busy hands or without the door being in the way.

[0022] As a more preferred variant, the door comprises means or a device for autonomously returning the door (i.e. without an external thrust) to at least one angular position. More preferably, said means or a device are means or a device for returning the door to one of said three angular positions. Thus, for example, it is possible to close comfortably the door without accompanying it to the end of its stroke.

[0023] As a preferred variant, the door comprises a damper for damping the rotation of the door about the hinging axis. In particular, the damper is mounted at a hinge of a spacer support.

[0024] Another aspect of the invention relates to a furniture arrangement, comprising.

a wall dividing two rooms,

a passage opening in the wall between the two rooms,

a furniture item set up against the wall and at one side of the opening,

a door hinged to the furniture item, one side of the door being hinged cantilevered on the furniture item so that the door can rotate concealing or clearing the passage opening.

[0025] Another aspect of the invention relates to a furniture arrangement, comprising.

a wall dividing two rooms,

a passage opening in the wall between the two rooms,

a first and second furniture item placed up against the wall and, respectively, on opposite sides of the passage opening,

a door hinged to the first furniture item, one side of the door being hinged cantilevered to the first furniture item so that the door can pivot concealing or clearing the passage opening, and so that the free end of the door touches or grazes the second furniture item when the door is parallel to the plane of the

wall.

[0026] The furniture item, the door and the furniture arrangement share the variants already defined above for the method or the aspect of the invention concerning the furniture item.

[0027] Preferably, the furniture item's structure is such that the furniture item comprises a compartment defining a space - e.g. open to the outside - delimited by a bottom, a ceiling, two vertical side walls spaced apart from each other by the width of the compartment, and a rear wall (a back wall).

[0028] The advantages of the invention will be clearer from the following description of a preferred embodiment of furniture item, reference being made to the attached drawing in which

- Fig. 1 shows a plan view of a furniture item arrangement according to the invention;
- Fig. 2 shows a three-dimensional view of a furniture item according to the invention;
- Fig. 3 shows an enlargement of the dotted circle in Fig. 2;
- Fig. 4 shows an enlargement of a hinge of the furniture item,
- Fig. 5 shows a plan view of a different furniture item arrangement according to the invention.

[0029] In the figures equal numbers indicate equal or conceptually similar parts, and elements are described as in use.

[0030] A furniture arrangement is shown in Fig. 1, and is associated with a wall 10 dividing two rooms. A passageway opening 12 between the rooms is provided in the wall 10, wherein the opening 12 may be unobstructed or closable by a door (not shown).

[0031] A furniture item 20 is placed abutting the wall 10 and at one side of the opening 12. A door 40 is hinged to one side of the furniture item 20.

[0032] In particular, the furniture item 20 is a column furniture item and/or is associated with other furniture items 22 aligned along the wall 10 to form a wider furniture item .

[0033] The furniture item 20 comprises, for example, a compartment 24 defining a space - e.g. open to the outside - delimited by a bottom 26, a ceiling 28, two vertical side walls 30 spaced apart from each other by the width of the compartment 24, and a rear wall 32.

[0034] One side of the door 40 is hinged cantilevered to the furniture item 20 so that the door 40 can rotate concealing or clearing the passage opening 12.

[0035] In the illustrated example, the door 40 is hinged cantilevered with respect to a wall 30 so that the door 40 by rotating can conceal or clear the passage opening 12.

[0036] The door 40 is hinged flush with the furniture item 20, such that the lying plane of the door 40 can be coplanar to an imaginary plane passing through the front edges of the furniture item 20. In other words, the door

40 is mounted to lie coplanar to the front edges of the compartment 14. In this way, the door 40 is mounted for

remaining suspended cantilevered in front of the opening 12, and

remaining suspended in front of the opening 12 at some distance from the opening 12, and

being able to remain suspended in front of the opening 12 in a position parallel to the wall 10.

[0037] Thus, when the door 40 is placed parallel to the wall 10, i.e. parallel to said imaginary plane, the free end of the door touches or grazes the furniture item 22 placed at the opposite side of the opening 12, concealing the opening 12 from sight,

[0038] The door 40 is hinged about a vertical axis Y that is external to the furniture item 20. For this purpose, the furniture item 20 comprises two rigid spacer supports 50 that are - in use - attached to the ceiling 28 and bottom 26 aligned along a vertical axis. Each support 50 is mounted to extend cantilevered from a side of the furniture item 20 in a horizontal direction (along a direction orthogonal to the two walls 30). Each support 50 supports at its free end a hinge 42 for the door 40.

[0039] The door 40 preferably comprises a hydraulic or pneumatic device 44 for making the door 40 temporarily blockable in at least one angular position, for example parallel to the wall 10 as visible in Fig. 2.

[0040] More preferably, the hydraulic or pneumatic device 44 may make the door 40 temporarily blockable in three angular positions, located 90 degrees apart, e.g., one position parallel to the wall 10 as visible in Fig. 2 and two opposite positions in which the door 40 is orthogonal to the wall 10.

[0041] Preferably, the same hydraulic or pneumatic device 44 may also independently return the door 40 to at least one of the aforementioned angular positions, or may dampen the rotation of the door 40 about the axis Y.

[0042] Fig. 5 shows another different furniture item arrangement.

[0043] Here, the door 40 is hinged to one side of the furniture item 20, and there is no furniture items on the opposite side of the opening 12.

[0044] In order to close or conceal the opening 12, one side of the door 40 is hinged cantilevered to the furniture item 20 so that the door 40 can rotate concealing or clearing the passage opening 12. The door 40 is hinged so that the lying plane of the door 40 when closed can be coplanar to an imaginary plane passing through the rear edges of the furniture item 20 (or in other words coplanar to an imaginary plane passing through the rear wall 32).

Claims

1. Mounting method for a door (40) that conceals a pas-

sage opening (12) in a wall (10) between two rooms, the door being detached from the wall, wherein

the door is hinged on a furniture item (20) that is placed up against the wall and at one side of the opening, one side of the door being hinged cantilevered on the furniture item so that the door can rotate concealing or clearing the passage opening.

2. Furniture item (20) comprising:

a door (20) adapted to conceal or clear a passage opening (12) in a wall (10) between two rooms, one side of the door being hinged cantilevered to the furniture item so that the door can rotate concealing or clearing the passage opening next to the furniture item.

3. Furniture item (20) according to claim 2, wherein the door is hinged flush with the furniture item, such that the laying plane of the door, when the latter is parallel to the wall, is substantially coplanar to an imaginary plane passing through the front edges of the furniture item.

4. Furniture item (20) according to claim 2 or 3, wherein the door is hinged about an axis (Y) which is vertical and external to the furniture item.

5. Furniture item (20) according to claim 2 or 3 or 4, comprising two rigid spacer supports (50) which are - in use - fixed to the furniture item aligned along a vertical axis, each support extending cantilevered from the furniture item in a horizontal direction and supporting a hinge for the door.

6. Furniture item (20) according to claim 5, wherein each support (50) extends cantilevered from the furniture item in a direction parallel to the wall.

7. Furniture item (20) according to claim 2 or 3 or 4 or 5 or 6, comprising means or a device for blocking the door temporarily in at least one angular position.

8. Furniture item (20) according to claim 7, wherein said means or device are means or a device for blocking temporarily the door in three angular positions, set at 90 degrees apart from each other.

9. Furniture item (20) according to claim 2 or 3 or 4 or 5 or 6 or 7 or 8, comprising means or a device for independently returning the door to at least one angular position.

10. Furniture arrangement, comprising:

a wall (10) dividing two rooms,
a passage opening (12) in the wall between the
two rooms,
a furniture item (20) placed up against the wall
and at one side of the opening,
a door (40) hinged to the furniture item, one side
of the door being hinged cantilevered to the fur-
niture item so that the door can rotate concealing
or clearing the passage opening.

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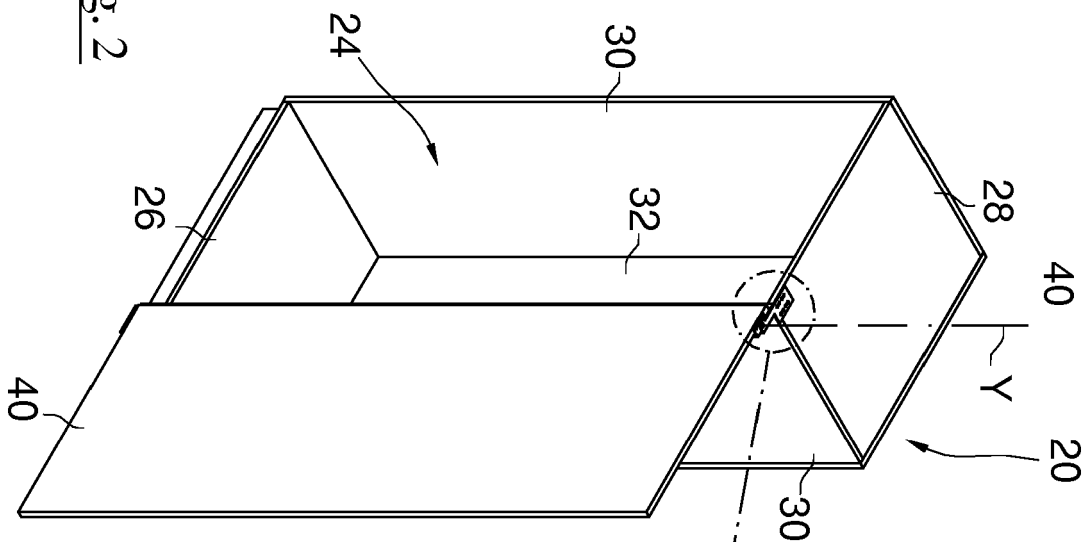


Fig. 2

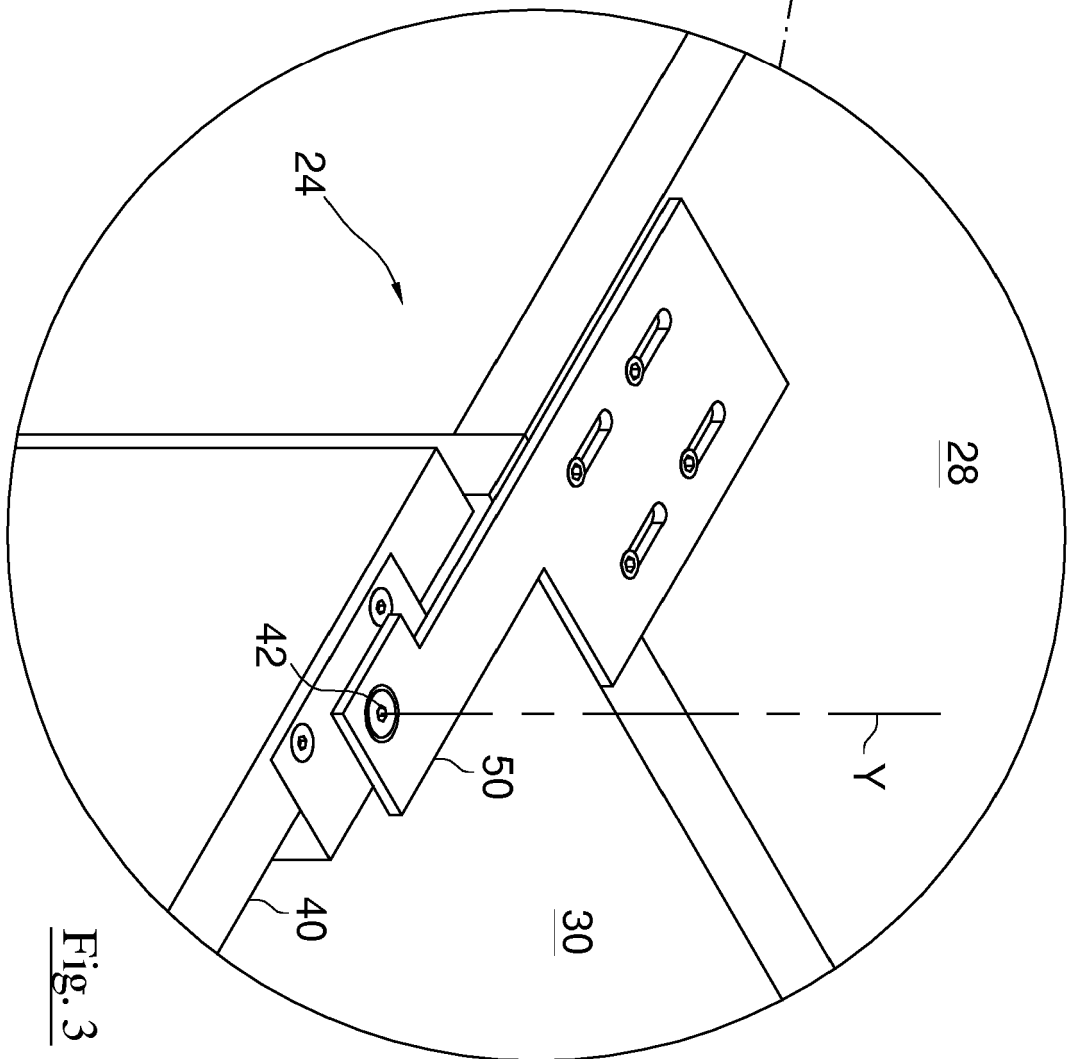
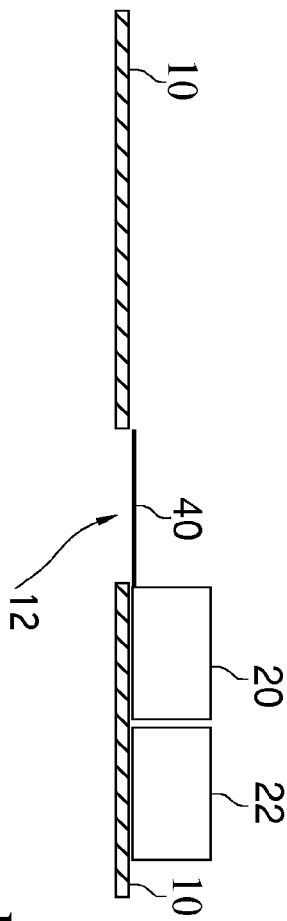
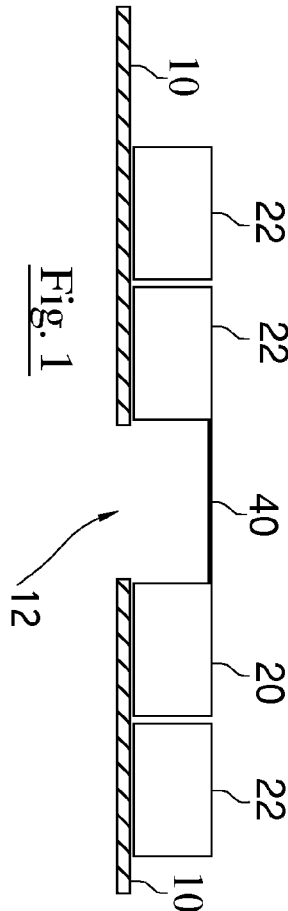
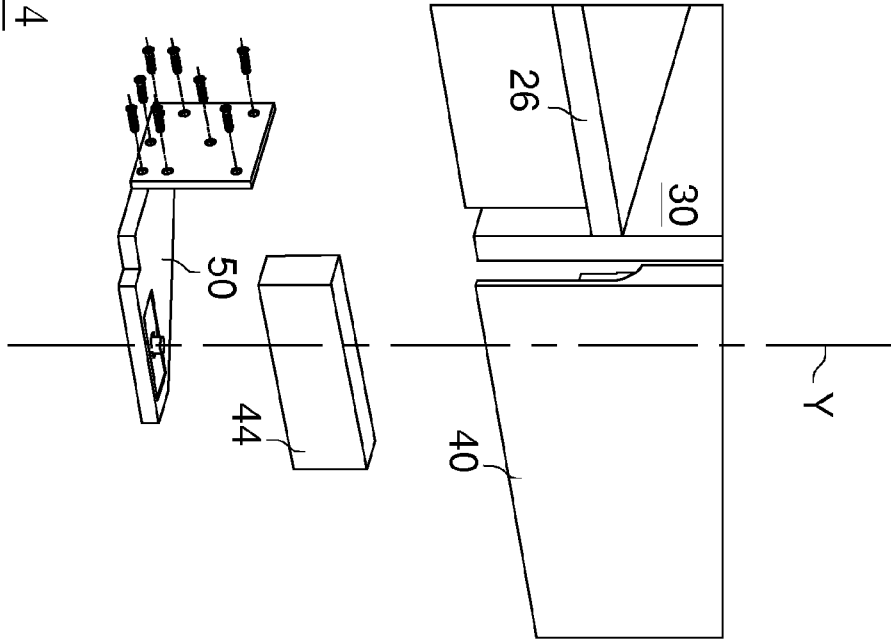


Fig. 3





EUROPEAN SEARCH REPORT

Application Number

EP 21 20 3047

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EPO FORM 1503 03.82 (P04C01)

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2 385 169 A (STONE ROY A) 18 September 1945 (1945-09-18)	1-6	INV. E05D7/081
Y	* figures 1-4 *	7-9	E05D5/06
A	* column 1, line 28 - column 2, line 17 * -----	10	E05D7/04
X	US 6 402 271 B1 (KELLEY JAMES O [US] ET AL) 11 June 2002 (2002-06-11)	1-4	
A	* figures * * column 2, line 66 - column 3, line 55 * -----	5-10	
Y	US 3 586 355 A (MAGI HUGO) 22 June 1971 (1971-06-22) * figures * * column 1, line 52 - column 3, line 4 * -----	7-9	
X	Salocks ET AL: "See it. Or not? How to make a BILLY bookcase secret door - IKEA Hackers", / 7 January 2019 (2019-01-07), XP055821784, Retrieved from the Internet: URL:https://web.archive.org/web/202009142023/https://www.ikeahackers.net/2019/01/secret-door-billy-bookcase.html [retrieved on 2021-07-06] * figures * -----	1-4,10	TECHNICAL FIELDS SEARCHED (IPC) E05D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 10 March 2022	Examiner Mund, André
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2385169 A	18-09-1945	NONE	
US 6402271 B1	11-06-2002	US 5927833 A	27-07-1999
		US 6402271 B1	11-06-2002
US 3586355 A	22-06-1971	NONE	

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82