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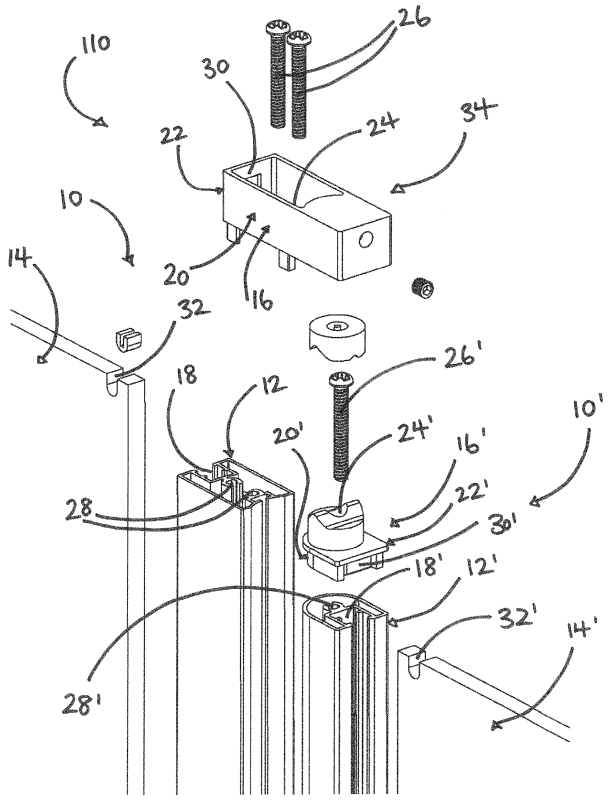
(54) A SHOWER PANEL

(57) This invention relates to a shower panel. Specifically, the present invention relates to a shower panel comprising a frame engagable with a fluid-impermeable barrier, and means for retaining the fluid-impermeable barrier with the frame. Accordingly, the present invention provides a shower panel with decreased risk of disengagement between a frame and a fluid-impermeable barrier. Also disclosed is a method of assembling a shower panel of the invention, a kit for assembling a shower panel of the invention, and a shower panel system comprising more than one shower panels of the invention.

Figure 3



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Description

Field of the Invention

[0001] This invention relates to a shower panel.

Background to the Invention

[0002] The use of showers has increased in the latter half of the twentieth century as personal hygiene has become a primary concern, and bathing every day or multiple times a day is common among Western cultures. Showering is generally faster than bathing and can use less water.

[0003] Designs for shower facilities vary by location and purpose. Domestic showers are most commonly installed over, and integrated with, a bathtub or are fitted as stall showers. A stall shower is a dedicated, free-standing shower area, which is defined by at least one watertight barrier, such as a shower curtain or shower panel, to contain water spray from, for example, an overhead shower head. A shower installed over, and integrated with, a bathtub usually comprises at least one watertight barrier, such as a shower curtain or shower panel, which forms an integral barrier with the bathtub to contain water spray from, for example, an overhead shower head.

[0004] A shower panel can be used as an alternative to a shower curtain; and is a panel, which can be generally planar or curved in shape, and which is used to define shower area and retain water spray from a shower head. The shower panel can be fixedly mounted to a wall or adjacent panel, or can be pivotably mounted to a wall or adjacent panel in order to form a pivoting door. Alternatively, the shower panel can be slidably mounted to a wall or adjacent panel to form a sliding door. A water-impermeable lining, for example a plastic lining, is often provided at or adjacent the terminal edges of the shower panel to protect against water leakage. The shower panel can be formed from a water-impermeable material such as aluminium, glass (usually toughened or tempered), or poly(methyl methacrylate; PMMA). A shower panel can come in many different hardware finishes and glass patterns that can match other bathroom hardware such as taps, basins, and shower heads.

[0005] Although the installation requirements of each of shower differ, the installation of a shower generally requires laying water transportation pipes, including a pipe for hot water and for cold water, and a drainage pipe. Showers may be provided in different forms of installation system. For example, showers may be provided as complete and integrated shower units, which include a shower tray, a shower head, and at least one shower curtain or panel. More often, each of the components of the installation system are provided separately to facilitate storage, transport, and installation process.

[0006] Many shower panels comprise a frame, which engages a fluid-impermeable barrier. However, some shower panels comprise an incomplete frame, which only partially circumscribes the fluid-impermeable barrier. For example, some shower panels comprise an incomplete frame, known as a frameless shower panel, which engages only one side (or only a part of one side) of a fluid-impermeable barrier. Often the fluid-impermeable barrier is a glass sheet. There is a risk that the fluid-impermeable barrier (glass sheet) can disengage from the incomplete frame given the limited interface between the incomplete frame and the fluid-impermeable barrier, and given the substantial weight of the fluid-impermeable barrier (glass sheet).

[0007] Accordingly, it is an object of the present invention to provide a shower panel with decreased risk of disengagement between a frame and a fluid-impermeable barrier.

Summary of the Invention

[0008] According to a first aspect of the present invention, there is provided a shower panel comprising a frame engagable with a fluid-impermeable barrier, and means for retaining the fluid-impermeable barrier with the frame.

[0009] Optionally, the frame comprises an elongate member. Further optionally, the frame comprises an elongate member comprising a guide.

[0010] Optionally, the guide is adapted to receive the fluid-impermeable barrier.

[0011] Optionally, the guide comprises a channel having side walls. Further optionally, the channel is adapted to receive the fluid-impermeable barrier. Still further optionally, the channel is shaped and dimensioned to receive the fluid-impermeable barrier.

[0012] Optionally, the guide is adapted to retain the fluid-impermeable barrier.

[0013] Optionally, the guide comprises a channel having side walls. Further optionally, the channel is adapted to retain the fluid-impermeable barrier. Still further optionally, the channel is shaped and dimensioned to retain the fluid-impermeable barrier.

[0014] Optionally, the sidewalls of the channel are spaced apart. Further optionally, the sidewalls of the channel are spaced apart to receive and retain the fluid-impermeable barrier therebetween.

[0015] Optionally, the retaining means are adapted to engage the frame and the fluid-impermeable barrier.

[0016] Optionally, the retaining means comprise a first end adapted to engage the frame and a second end adapted to engage the fluid-impermeable barrier.

[0017] The first end and the second end of the retaining means can be separate or integral. Optionally, the first end and the second end of the retaining means are separate. Alternatively, the first end and the second end of the retaining means are integral.

[0018] Optionally, the first end of the retaining means comprises an aperture to receive a fixing. Further optionally, the frame comprises an aperture to receive a fixing.

[0019] Optionally, the fixing is a threaded member. Fur-

ther optionally, one or both of the aperture of the first end of the retaining means and the aperture of the frame is a threaded aperture. Optionally, one or both of the aperture of the first end of the retaining means and the aperture of the frame is a threaded aperture corresponding to the threaded member.

[0020] Optionally, the second end of the retaining means comprises a stop.

[0021] Optionally, the stop is a projection extending from the second end of the retaining means. Further optionally, the stop is a projection extending substantially perpendicularly from the second end of the retaining means.

[0022] Optionally, the fluid-impermeable barrier is adapted to receive the stop of the second end of the retaining means.

[0023] Optionally, the fluid-impermeable comprises a recess to receive the stop of the second end of the retaining means.

[0024] Optionally, the recess is located at or adjacent a terminal edge of the fluid-impermeable barrier. Further optionally, the recess opens at or adjacent a terminal edge of the fluid-impermeable barrier.

[0025] Optionally, in use, the retaining means engages the frame and the fluid-impermeable barrier to retain the fluid-impermeable barrier with the frame.

[0026] Optionally, in use, the first end of the retaining means is fixedly engaged with the frame. Further optionally, in use, the aperture of the first end of the retaining means is fixedly engaged with the frame. Still further optionally, in use, the aperture of the first end of the retaining means is fixedly engaged with the aperture of the frame.

[0027] Optionally or additionally, the second end of the retaining means is engaged with the fluid-impermeable barrier. Further optionally, in use, the stop of the second end of the retaining means is engaged with the fluid-impermeable barrier. Still further optionally, in use, the stop of the second end of the retaining means is engaged with the recess of the fluid-impermeable barrier.

[0028] According to a second aspect of the present invention, there is provided a method of assembling a shower panel according to the first aspect of the present invention, the method comprising the steps of:

(a) providing a frame;
(b) providing a fluid-impermeable barrier;
(c) providing retaining means having first and second ends;
(d) engaging a first end of the retaining means with the frame; and
(e) engaging a second end of the retaining means with the fluid-impermeable barrier.

[0029] According to a third aspect of the present invention, there is provided a kit for assembling a shower panel according to the first aspect of the present invention, the kit comprising a frame; a fluid-impermeable barrier; retaining means having a first end for engaging with the frame and a second end for engaging with the fluid-impermeable barrier; and instructions for use.

[0030] According to a further aspect of the present invention, there is provided a shower panel system comprising more than one shower panel according to the first aspect of the present invention.

[0031] Optionally, the system comprises at least two shower panels according to the first aspect of the present invention. Further optionally, the system comprises two shower panels according to the first aspect of the present invention. Still further optionally, the system comprises first and second shower panels according to the first aspect of the present invention.

[0032] Optionally, the system further comprises coupling means for coupling the first and second shower panels. Further optionally, the system further comprises coupling means for coupling the first and second retaining means of the first and second shower panels.

[0033] The coupling means and each or both of the first and second retaining means can be separate or integral. Optionally, the coupling means and each or both of the first and second retaining means are separate. Alternatively, the coupling means and each or both of the first and second retaining means are integral.

[0034] Optionally, the coupling means comprise a body adapted to receive one or both of the first and second retaining means.

[0035] Optionally, the coupling means are integral with the first retaining means.

[0036] Optionally or additionally, the coupling means are adapted to receive the second retaining means. Further optionally or additionally, the coupling means are adapted to pivotably receive the second retaining means.

[0037] Optionally, the first retaining means comprise a first end adapted to engage the first frame and a second end adapted to engage the first fluid-impermeable barrier.

[0038] The first end and the second end of the first retaining means can be separate or integral. Optionally, the first end and the second end of the first retaining means are separate. Alternatively, the first end and the second end of the first retaining means are integral.

[0039] Optionally, the first end of the first retaining means comprises an aperture to receive a fixing. Further optionally, the first frame comprises an aperture to receive a fixing.

[0040] Optionally, the fixing is a threaded member. Further optionally, one or both of the aperture of the first end of the first retaining means and the aperture of the first frame is a threaded aperture. Optionally, one or both of the aperture of the first end of the first retaining means and the aperture of the first frame is a threaded aperture corresponding to the threaded member.

[0041] Optionally, the second end of the first retaining means comprises a stop.

[0042] Optionally, the stop is a projection extending from the second end of the first retaining means. Further optionally, the stop is a projection extending substantially

perpendicularly from the second end of the first retaining means.

Brief Description of the Drawings

[0043] Non-limiting embodiments of the present invention will now be described with reference to the accompanying drawings in which:

Figure 1 is an exploded perspective view of a first embodiment of a shower panel according to the present invention;

Figure 2 is an exploded perspective view of a second embodiment of a shower panel according to the present invention; and

Figure 3 is an exploded perspective view of a shower panel system according to a further aspect of the present invention.

Detailed Description of the Invention

[0044] Referring now to Figures 1 and 2, there is shown an exploded perspective view of first and second embodiments of a shower panel 10 according to the present invention. The shower panel 10 comprises a frame 12 engagable with a fluid-impermeable barrier 14, and means 16 for retaining the fluid-impermeable barrier 14 with the frame 12.

[0045] The frame 12 can comprise an elongate member, which can generally be of the same or similar length as the fluid-impermeable barrier 14, although it is understood that the frame 12 can generally be of any suitable length and does not necessarily have to be the same or similar length as the fluid-impermeable barrier 14.

[0046] In preferred embodiments, the frame 12 comprises an elongate member comprising a guide 18. The guide 18 can be adapted to receive the fluid-impermeable barrier 14. The guide 18 can generally be of the same or similar length as either or both of the frame 12 and the fluid-impermeable barrier 14, although it is understood that the guide 18 can generally be of any suitable length and does not necessarily have to be the same or similar length as the either or both of the frame 12 and the fluid-impermeable barrier 14. The guide 18 extend at least part of the length of either or both of the frame 12 and the fluid-impermeable barrier 14. In preferred embodiments, the guide 18 extends substantially the length of both the frame 12 and the fluid-impermeable barrier 14.

[0047] The guide 18 can comprise a channel 18 having side walls. The channel 18 can be adapted to receive the fluid-impermeable barrier 14. For example, the channel 18 can be shaped and dimensioned to receive the fluid-impermeable barrier 14. In such an embodiment, the transverse dimensions of the channel 18 are substantially the same or similar to the transverse dimensions of the fluid-impermeable barrier 14.

[0048] The guide 18 can be adapted to retain the fluid-impermeable barrier 14.When the guide 18 comprises a channel 18 having side walls, the channel 18 can be adapted to retain the fluid-impermeable barrier 14. For example, the channel 18 can be shaped and dimensioned to retain the fluid-impermeable barrier 14. In such an embodiment, the sidewalls of the channel 18 are spaced apart receive and retain the fluid-impermeable barrier 14 therebetween. The transverse dimensions of the channel 18 are substantially the same or similar to the transverse dimensions of the fluid-impermeable barrier 14 to form an interference fit between the sidewalls of the channel 18 and the fluid-impermeable barrier 14. Additional adhesive and/or fluid-impermeable material can be provided between the sidewalls of the channel 18 and the fluid-impermeable barrier 14 to additionally retain the fluid-impermeable barrier 14.

[0049] The retaining means 16 can be adapted to engage the frame 12 and the fluid-impermeable barrier 14. In preferred embodiments, the retaining means 16 are adapted to simultaneously engage the frame 12 and the fluid-impermeable barrier 14. The retaining means 16 can comprise a first end 20 adapted to engage the frame 12 and a second end 22 adapted to engage the fluid-impermeable barrier 14. The first end 20 and the second end 22 of the retaining means 16 can be separate or integral. In preferred embodiments, the first end 20 and the second end 22 of the retaining means 16 are integral. However, in some embodiments, the first end 20 and the second end 22 of the retaining means 16 are separate and can be mounted, optionally fixedly mounted, to one another to form a retaining means 16.

[0050] In certain embodiments, the first end 20 of the retaining means 16 comprises an aperture 24 to receive a fixing 26. The frame 12 can comprise an aperture 28 to receive the fixing 26. The fixing 26 is preferably a threaded member. The aperture 24 of the first end 20 of the retaining means 16 can be a threaded aperture. Optionally or additionally, the aperture 28 of the frame 12 is a threaded aperture. The aperture 24 of the first end 20 of the retaining means 16 and the aperture 28 of the frame 12 can each independently be a threaded aperture corresponding to the threaded member 26.

[0051] The second end 22 of the retaining means 16 can comprise a stop 30. The stop30 is a projection extending from the second end 22 of the retaining means 16. The stop 30 can be a projection extending substantially perpendicularly from the second end 22 of the retaining means 16.

[0052] In preferred embodiments, the fluid-impermeable barrier 14 is adapted to receive the stop 30 of the second end 24 of the retaining means 16. The fluid-impermeable barrier 14 can comprise a recess 32 to receive the stop 30 of the second end 22 of the retaining means 16. The recess 32 is preferably located at or adjacent a terminal edge of the fluid-impermeable barrier 14, which engages, in use, with the second end 22 of the retaining means 16. The recess 30 opens at or adjacent a terminal

edge of the fluid-impermeable barrier 14 to allow the stop 30 to be retained within the recess 30. Although embodiments are described wherein the retaining means 16 comprises a stop 30 and the fluid-impermeable barrier 14 comprises a recess 32, it is understood that, alternatively, the retaining means 16 can comprise a recess and the fluid-impermeable barrier 14 comprises a stop. Indeed, any form of male/female cooperation can be used within the scope of this invention. In such a way, in use, the retaining means 16 engages the frame 12 and the fluid-impermeable barrier 14 to retain the fluid-impermeable barrier 14 with or at the frame 12.

[0053] In the embodiments described, the first end 20 of the retaining means 16 is fixedly engaged with the frame 12, and in some embodiments, in use, the aperture 24 of the first end 20 of the retaining means 16 is fixedly engaged with the frame 12. In some further embodiments, in use, the aperture 24 of the first end 20 of the retaining means 16 is fixedly engaged with the aperture 28 of the frame 12. Optionally or additionally, the second end 22 of the retaining means 16 is engaged with the fluid-impermeable barrier 14 and preferably, in use, the stop 30 of the second end 22 of the retaining means 16 is engaged with the fluid-impermeable barrier 14, wherein in some embodiments, in use, the stop 30 of the second end 22 of the retaining means 16 is engaged with the recess 32 of the fluid-impermeable barrier 14.

[0054] The present invention also relates to a method of assembling a shower panel 10 according to the first aspect of the present invention. The method comprises the steps of providing a frame 12; providing a fluid-impermeable barrier 14; providing retaining means 16 having first 20 and second ends 22; engaging a first end 22 of the retaining means with the frame 12; and engaging a second end 24 of the retaining means 16 with the fluid-impermeable barrier 14.

[0055] The invention also provides a kit for assembling a shower panel 10 according to the first aspect of the present invention. The kit can comprise a frame 12; a fluid-impermeable barrier 14; retaining means 16 having a first end 20 for engaging with the frame 12 and a second end 22 for engaging with the fluid-impermeable barrier 14; and instructions for use.

[0056] Also disclosed is a shower panel system 110. Referring to Figure 3, there is shown an exploded perspective view of a shower panel system 110 according to a further aspect of the present invention. The shower panel system 110 can comprise more than one shower panel 10 according to the first aspect of the present invention. For example, the system 110 can comprises at least two shower panels 10 according to the first aspect of the present invention. In certain embodiments, the system 110 comprises first 10 and second 10' shower panels according to the first aspect of the present invention.

[0057] The system 110 can further comprise coupling means 34 for coupling the first 10 and second 10' shower panels. Preferably, the system 110 further comprises coupling means 34 for coupling the first 16 and second 16' retaining means of the first 10 and second 10' shower panels.

[0058] The coupling means 34 can comprise a body adapted to receive one or both of the first 16 and second 16' retaining means. The coupling means 34 and each or both of the first 16 and second 16' retaining means can be separate or integral. In preferred embodiments, the coupling means 34 and the second 16' retaining means are separate. Optionally, or additionally, the coupling means 34 and the first 16 retaining means are integral. In some embodiments, the coupling means 34 are adapted to receive the second 16' retaining means. In certain preferred embodiments, the coupling means 34 are adapted to pivotably receive the second 16' retaining means, such that the second frame 12' and/or the second fluid-impermeable barrier 14' are pivotable relative to the first frame 12. In such an arrangement, the second frame 12' and/or the second fluid-impermeable barrier 14' can be used as a pivotable door.

[0059] The first 16 retaining means can comprise a first end 20 adapted to engage the first frame 12 and a second end 24 adapted to engage the first fluid-impermeable barrier 14. The first end 20 and the second end 22 of the first 16 retaining means can be separate or integral and, in preferred embodiments, the first end 20 and the second end 22 of the first 16 retaining means are integral. The first end 20 of the first 16 retaining means can comprise a first aperture 24 to receive at least one fixing 26. The first frame 12 can comprise an aperture 28 to receive each or any of the at least one fixing 26. When the fixing 26 is a threaded member, one or both of the aperture 24 of the first end 20 of the first 16 retaining means and the aperture 28 of the first frame 12 is a threaded aperture. Either or both of the aperture 24 of the first end 20 of the first 16 retaining means and the aperture 28 of the first frame 12 is a threaded aperture corresponding to the threaded member 26.

[0060] The second end 22 of the first 16 retaining means can comprise a stop 30. The stop 30 is a projection extending from the second end 22 of the first 16 retaining means. The stop 30 can be a projection extending substantially perpendicularly from the second end 22 of the first 16 retaining means.

[0061] Accordingly, the present invention provides a shower panel with decreased risk of disengagement between a frame and a fluid-impermeable barrier.

Claims

1. A shower panel comprising a frame engagable with a fluid-impermeable barrier, and means for retaining the fluid-impermeable barrier with the frame; wherein the frame comprises an elongate member comprising a guide adapted to receive the fluid-impermeable barrier.

2. A shower panel according to Claim 1, wherein the

retaining means comprise a first end adapted to engage the frame and a second end adapted to engage the fluid-impermeable barrier; and wherein the first end of the retaining means comprises an aperture to receive a fixing and the frame comprises an aperture to receive a fixing; and wherein the second end of the retaining means comprises a stop.

3. A shower panel according to Claim 2, wherein the fluid-impermeable barrier is adapted to receive the stop of the second end of the retaining means.

4. A shower panel according to Claim 2 or 3, wherein the fluid-impermeable comprises a recess to receive the stop of the second end of the retaining means.

5. A method of assembling a shower panel according to any one of Claims 1-4, the method comprising the steps of:

(a) providing a frame;
(b) providing a fluid-impermeable barrier;
(c) providing retaining means having first and second ends;
(d) engaging a first end of the retaining means with the frame; and
(e) engaging a second end of the retaining means with the fluid-impermeable barrier.

6. A kit for assembling a shower panel according to any one of Claims 1-4, the kit comprising a frame; a fluid-impermeable barrier; retaining means having a first end for engaging with the frame and a second end for engaging with the fluid-impermeable barrier; and instructions for use.

7. A shower panel system comprising more than one shower panels according to any one of Claims 1-4.

8. The system according to Claim 7 comprising first and second shower panels; wherein the system further comprises coupling means for coupling the first and second shower panels.

9. The system according to Claim 7 or 8, wherein the system further comprises coupling means for coupling the first and second retaining means of the first and second shower panels.

10. The system according to Claim 9, wherein the coupling means comprise a body adapted to receive one or both of the first and second retaining means.

11. The system according to Claim 9 or 10, wherein the coupling means are integral with the first retaining means.

12. The system according to any one of Claims 9-11, wherein the coupling means are adapted to pivotably receive the second retaining means.

13. The system according to any one of Claims 9-12, wherein the first retaining means comprise a first end adapted to engage the first frame and a second end adapted to engage the first fluid-impermeable barrier.

14. The system according to Claim 13, wherein the first end of the first retaining means comprises an aperture to receive a fixing and the first frame comprises an aperture to receive the fixing.

15. The system according to Claim 13 or 14, wherein the second end of the first retaining means comprises a stop.

Figure 1

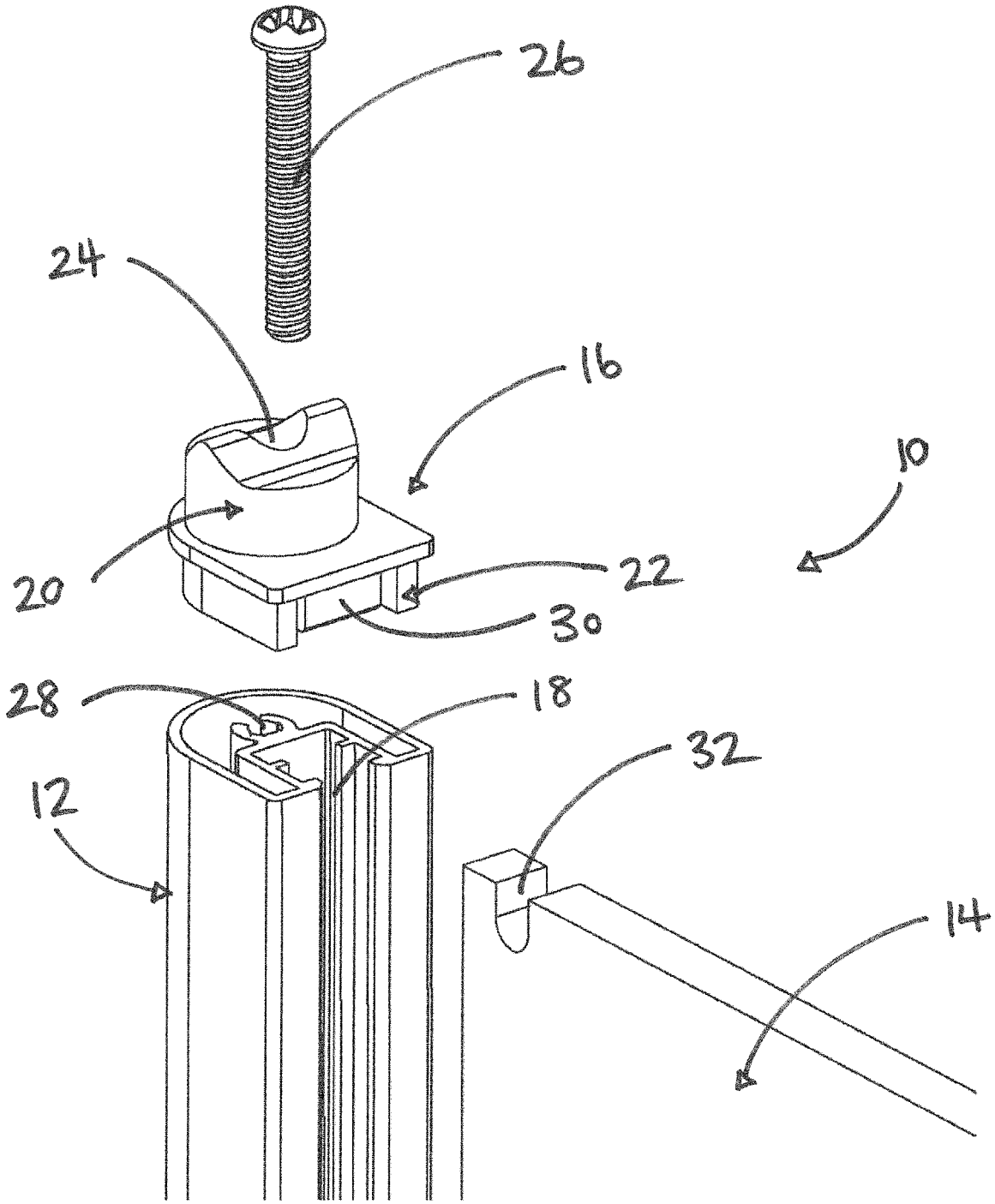


Figure 2

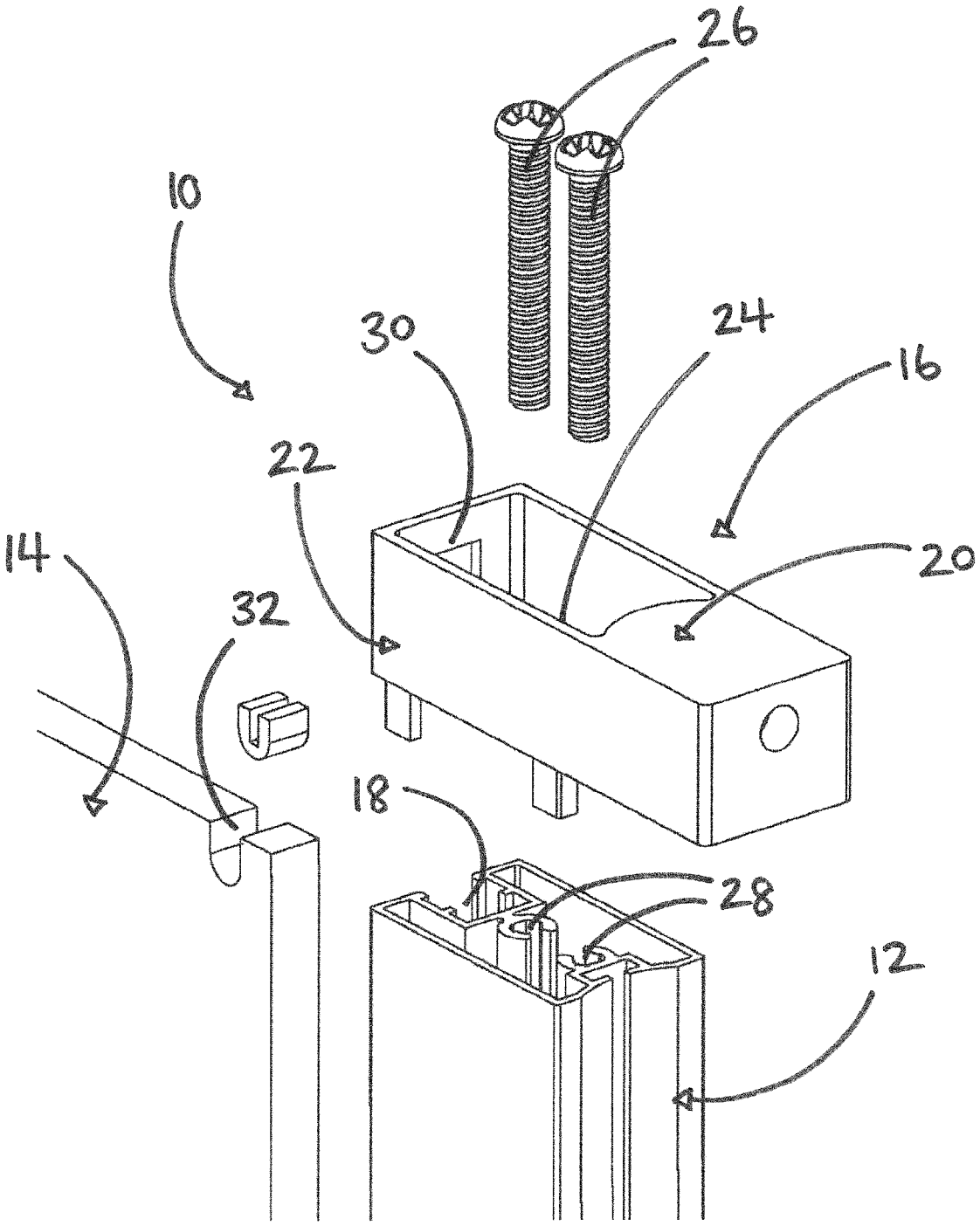
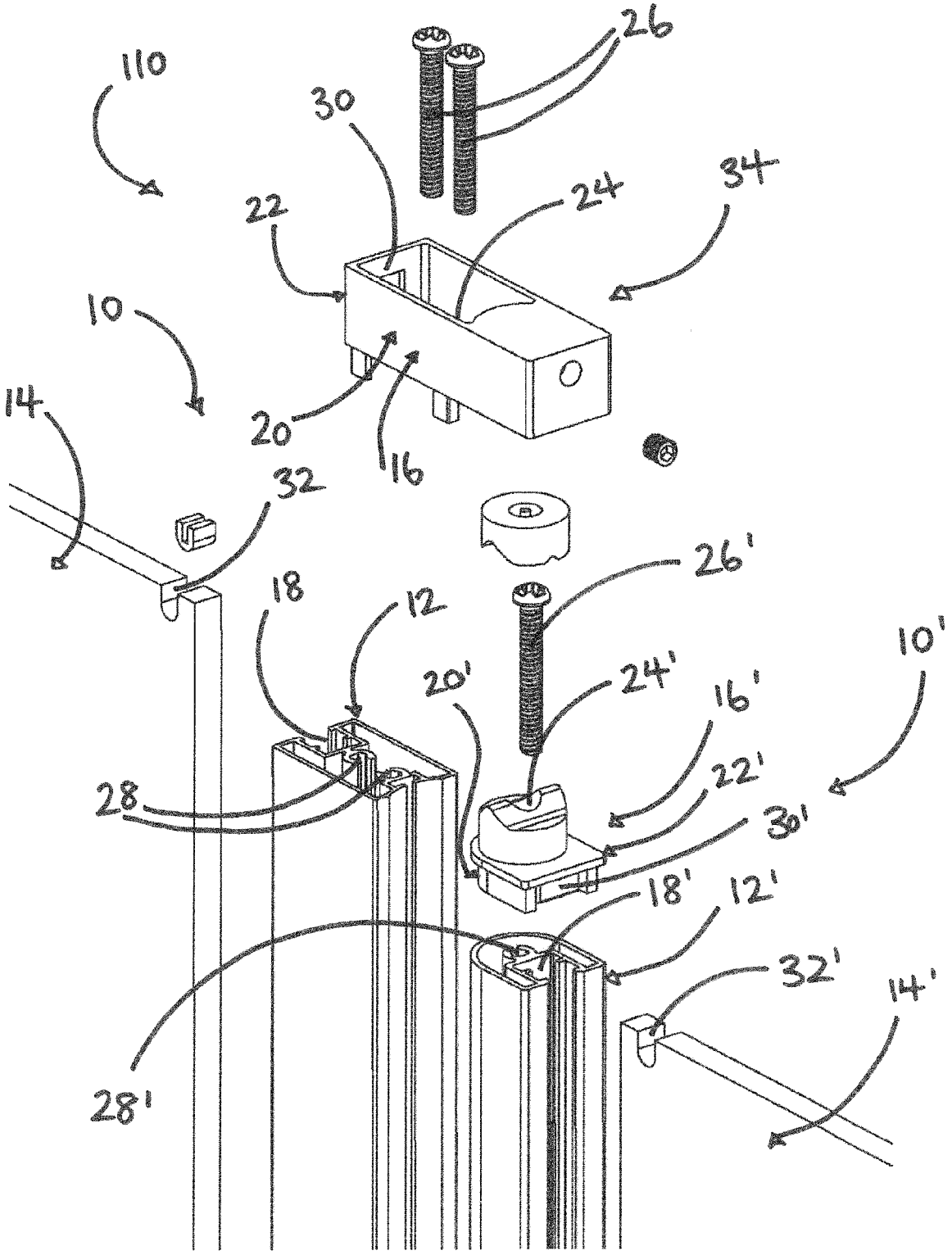


Figure 3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EUROPEAN SEARCH REPORT

Application Number
EP 15 19 1350

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TECHNICAL FIELDS SEARCHED (IPC)

A47K
E05D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	18 February 2016	Boyer, Olivier

CATEGORY OF CITED DOCUMENTS

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