(11) **EP 3 591 155 A1**

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

08.01.2020 Bulletin 2020/02

(51) Int Cl.:

E05D 15/06 (2006.01) E06B 7/16 (2006.01) E06B 3/46 (2006.01)

(21) Application number: 19183351.6

(22) Date of filing: 28.06.2019

(84) Designated Contracting States:

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated Extension States:

BA ME

Designated Validation States:

KH MA MD TN

(30) Priority: 05.07.2018 SE 1850853

(71) Applicant: SSC Öhns Snickeri AB 904 22 Umeå (SE)

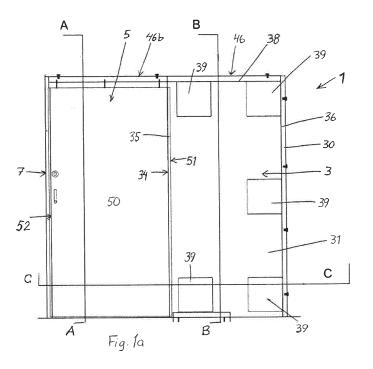
(72) Inventors:

- BÄCKSTRÖM, Sverker 906 24 Umeå (SE)
- NYSTRÖM, Anders 903 53 Umeå (SE)
- (74) Representative: Zacco Sweden AB P.O. Box 5581 114 85 Stockholm (SE)

(54) SLIDING DOOR SYSTEM WITH SLIDING DOOR AND WALL MODULE

(57) Sliding door system (1) comprising a sliding door (5), a wall module (3) and a stop frame (7) configured for receiving the sliding door when the sliding door is in the closed position. The wall module (3) comprises a frame (30) on which is mounted a first wall side (31) and a second wall side (32), an interior space (33) for receiving a sliding door and which interior space is arranged between the first wall side and the second wall side, an opening (34) leading into the space, and sealing strips (40) ar-

ranged adjacent to the opening (34) of the wall module. The sliding door comprises a door leaf (50) and a first vertical long side (51) configured to advance in front into the opening of the wall module, and an end member (53) extending along the first vertical long side, said end member having a first and a second protruding part (53a, 53b) protruding past the door leaf (50), on each side of the door leaf.



Technical field

[0001] The present invention relates to a sliding door system comprising a wall module and a sliding door configured to be inserted into the wall module. It also relates to a sliding door and a wall module.

Background

[0002] Sliding door systems with a retracted sliding door is usually provided in the form of a sliding door as well as a set of various frames, header and jamb parts and strips to be assembled in order to form a support frame for the wall into which the sliding door is to be inserted. Such a support frame is sometimes called a pocket frame. When this support frame is assembled and installed in a wall cavity intended for this purpose, the sliding door is mounted and when this is finished, the support frame is covered with wall panels, e.g. plaster-board or chipboard.

[0003] It is previously known sliding door systems where seals are arranged in different places. The purpose of the seals is to provide some form of sealing between the sliding door and the surrounding wall portions when the sliding door is in the closed position. These seals can have different functions. For example, the seals may have the function of sealing against sounds, smells, lights, air draught. There are also known seals that will seal against smoke in the event of a fire as well as seals that will prevent the spread of fire. Another function can be to seal around the door opening in the wall into which the sliding door is pushed in order to prevent that a person is able to see inside the wall itself.

[0004] From WO 2015181530 is previously known a recessed sliding door with a support frame of the aforementioned kind and it is also known to use seals or what are called brushes, with the aim of providing at least some of the sealing functions mentioned above. These seals are mounted in conjunction with the support frame being assembled. In all examples in WO 2015181530, these seals are mounted on some part of the frame or header or jamb that surrounds the doorway that the sliding door is intended to close when the sliding door is in the closed position. The plurality of seals are then arranged so that they constantly abut against and slide against the surface of the door leaf as the sliding door is pushed forward or back in the doorway. This has i.a. the disadvantage that the door leaf is worn and can be damaged. Another disadvantage is that the friction between the seals and the door makes the actual opening and closing of the sliding door slow. Another disadvantage of the sliding door in WO 2015181530 is that it has no seal against the floor.

Brief description

[0005] It is an object of the present invention to provide

a sliding door system that enables a simplified installation and where the result is that the sliding door can be moved easily and at the same time a satisfactory seal can be obtained around the door.

[0006] In accordance with the invention, a sliding door is configured to be retracted into a wall module comprising an opening for receiving the sliding door, the sliding door comprising a door leaf, a first vertical long side configured to advance in front into the opening of the wall module, and a second vertical long side configured for cooperating with a stop frame when closing the sliding door, characterized in that it comprises an end member extending along the first vertical long side, said end member having a first and a second protruding part protruding past the door leaf, on each side of the door leaf.

[0007] By providing this end member, the advantage is obtained that the first and second protruding parts can be used for the abutting of sealing strips that are then arranged at the opening of the wall module. When the sliding door is in the closed position, these sealing strips may abut against the first and second protruding parts of the end member. In this way, a seal is obtained between the sliding door and the wall module when the sliding door is closed.

[0008] The end member and its protruding parts thus preferably extend along the entire vertical long side of the sliding door.

[0009] The first and second protruding parts of the end member can then be described as protruding in a horizontal direction past the door leaf. Or, in other words, the first and second protruding parts may protrude substantially perpendicular to the door leaf.

[0010] The first and second protruding parts may be configured to cooperate with respective sealing strips arranged on the wall module adjacent to the wall module opening. The respective first and second protruding part may, for example, have a special design. They may, for example, be provided with a groove that is configured so that the respective sealing strip can snap into this groove when the sliding door is closed. In this way, a further improved seal and a distinct sealing position are obtained so that the person who closes the door can more easily perceive when the sliding door has reached a sealing closing position.

[0011] The sliding door may be provided with an upper sealing device comprising an upper sealing strip arranged along an upper end side of the door leaf, this upper sealing strip being arranged so that it has only a sealing function when the door is in the closed position. Furthermore, the sliding door may comprise an upper actuating mechanism that actuates the upper sealing strip to take a sealing position when the sliding door is closed. When the sliding door is open, the sealing strip is not active, i.e. it does not have a sealing function. When the sliding door is closed, the upper actuating mechanism acts on the sealing strip so that the sealing strip obtains a sealing function, i.e. the sealing strip is affected so that it comes into contact with an overhead frame, wall part,

40

ceiling or equivalent which is immediately above the sliding door and thus becomes active and sealing. This activation mechanism may contain, for example, a spring part so that when the sliding door reaches the stop frame, i.e. in the position where the sliding door is closed, the spring part abuts against the stop frame and then affects a movable part, e.g. a link arm, which causes the sealing strip to be pushed out for sealing abutment against a portion of an overhead frame above the sliding door. An example of such a device is given in the detailed part of this description. However, other embodiments of this actuating mechanism are conceivable.

[0012] The sliding door may be provided with a lower sealing device comprising a lower sealing strip arranged along a lower end side of the door leaf, this lower sealing strip being arranged so that it has only a sealing function when the door is in the closed position. The sliding door may also comprise a lower actuating mechanism that actuates the lower sealing strip to take a sealing position when the sliding door is closed. This lower sealing device may be configured in a manner similar to the upper sealing device. When the sliding door is open, the sealing strip is not active, i.e. it does not have a sealing function. When the sliding door is closed, the lower actuating mechanism affects the sealing strip so that the sealing strip has a sealing function, i.e. the sealing strip is affected so that it comes into contact with the floor or equivalent that is directly under the sliding door and thus becomes active and sealing. This actuating mechanism may, for example, contain a spring part so that when the sliding door reaches the stop frame, i.e. in the position where the sliding door is closed, the spring part abuts against the stop frame and then affects a movable part which causes the sealing strip to be pushed into a sealing abutment against the floor beneath the sliding door. An example of such a device is given in the detailed part of this description. However, other embodiments of this actuating mechanism are conceivable.

[0013] The advantage of the respective upper and lower sealing device is that there is no friction between door and frame/floor/ceiling during the closing itself. The door therefore runs easily and smoothly during closing and opening and yet a sealing function is obtained when the door is closed. There will also be no wear and tear on the door from sealing strips that are in contact during closing and opening, respectively.

[0014] The sliding door may be provided with a suspension device attached to the upper end side of the sliding door.

[0015] In accordance with the invention, a wall module for a sliding door is defined, which wall module comprises

- a frame on which is mounted a first wall side and a second wall side.
- an interior space for receiving a sliding door and which interior space is arranged between the first wall side and the second wall side,
- an opening leading into the interior space for receiv-

ing the sliding door and which opening is arranged in a first vertical long side of the wall module,

- a lower end side,
- an upper end side, and
- sealing strips arranged adjacent to the opening of the wall module, which sealing strips are configured to cooperate with the sliding door to provide a seal between the opening of the wall module and the sliding door when the sliding door is in the closed position.

[0016] This wall module is thus configured i.a. with sealing strips that can interact with the described sliding door. The wall module can advantageously be configured as a prefabricated wall module so that it can be transported as a unit and the final assembly on site is simplified. By a prefabricated wall module is thus meant that the wall module is a separate unit that is completed in the factory and which is transported to the final installation site as a unit. The wall module is thus a separate, standalone and independent module that is movable.

[0017] According to an example, the sealing strips are arranged opposite each other, on each inside of the respective first and second wall sides. According to one example, the sealing strips are configured to cooperate with a first and a second protruding part of an end member of the sliding door, which protruding parts extend past the sliding door leaf, on each side of the door leaf, and where the end member extends along a first vertical long side of the sliding door. Thus, the sealing strips extend vertically, preferably along the entire inside of the respective first and second wall sides of the wall module, at the vertical opening in the wall module.

[0018] That wall module may be configured such that at least one of said first and second wall sides is provided with at least one opening to provide access to the interior space of the wall module. This makes it possible to be able to perform complementary assembly work inside the wall module in place, at the final installation. This may, for example, apply to mounting of the wall module against an underlying floor, or mounting of the wall module to a wall or ceiling.

[0019] The wall module may, adjacent to the lower end side of the wall module, be provided with a control device configured for controlling a lower end side of a sliding door which is inserted through said opening and into the interior space. Such a control device has the advantage of controlling the sliding door so that it is in the correct position for the various sealing strips to fulfill their sealing function. The movement of the sliding door is also facilitated by means of a control. The control device may be fastened to the inside of at least one of said first and second wall sides.

[0020] The control device may include, for example, a control channel that is configured so that the lower end side of the sliding door can run freely in this control channel. Such a control channel may, for example, consist of a U-profile, for example in metal, in which the sliding door

25

30

35

40

45

50

55

can easily slide. There may also be a guide rail in the center of the U-profile, which contributes to additional control by cooperating with a corresponding groove provided in the lower end side of the sliding door.

[0021] Because the control device is mounted in the wall module, the control device, when made up of a U-profile or the like with abutment on the underlying floor, can also be used for fastening the wall module to the underlying floor.

[0022] The control channel extends from the opening and inwardly into the space. For example, the control channel may have a length corresponding to 40-60% of the length of the interior space along the lower end side. [0023] The wall module may also comprise an overhead frame which is secured to the upper end side of the wall module and which extends over the wall module and has an extension part having a length that at least corresponds to the width of the sliding door for which the wall module is intended. The extension part should thus extend all the way across the sliding door. The overhead frame is a guide for the sliding door when it is to be closed. [0024] According to the invention there is also provided a sliding door system, characterized in that it comprises a sliding door according to one of the descriptions above and a wall module according to one of the descriptions above.

[0025] According to an example, the sliding door system comprises a stop frame configured for receiving the sliding door when the sliding door is in the closed position. Such a stop frame is thus arranged in a vertical direction. [0026] The stop frame may comprise a vertical frame channel configured to cooperate with the second vertical long side of the sliding door upon closing the sliding door, and said frame channel comprises at least one sealing strip arranged for abutting the sliding door. In this way, a seal in the vertical direction is obtained between the sliding door and the stop frame when the door is closed. [0027] The frame channel of the stop frame may have sidewalls on which sealing strips are provided for abutting against the sliding door leaf, on either side of the door leaf, when the sliding door is in the closed position.

[0028] In the event that the wall module does not include any overhead frame, the sliding door system may comprise a separate overhead frame extending over the wall module and having an extension member extending at least to the stop frame.

[0029] The overhead frame may be provided with at least one downwardly projecting support strip configured for abutment, when the door is closed, of an upper sealing strip arranged along an upper end side of the door leaf.
[0030] The overhead frame may comprise a channel extending over the wall module and to the stop frame. The channel then has an opening facing downwards in which the upper end side of the sliding door can run and be moved during closing and opening of the sliding door, respectively. If the sliding door is suspended at its upper end side, the sliding door's suspension device may run in said channel, in which case there may also be any

device that may be needed to cooperate with the suspension device.

[0031] In general, the sealing strips described normally extend along the entire side or detail where they are described to be located.

[0032] The invention provides the advantage of a simplified mounting on the installation site itself by the fact that the wall module can be configured as a prefabricated wall module and delivered as a unit, and that all sealing strips are preferably pre-mounted on the wall module, the sliding door and the stop frame.

[0033] The arrangements with the various sealing strips result in a tight door installation when the sliding door is in its closed position.

Short description of figures

[0034] Descriptive examples will now be presented with reference to the accompanying drawings, which are given by way of example only and shall not be considered to have any limiting effect.

Figure 1a shows a sliding door system with a sliding door and a wall module, seen from a side view,

Figure 1b shows a cross-section along A-A in Figure 1a, where the sliding door is in the closed position,

Figure 1c shows a sectional view along B-B in Figure 1a, but here the sliding door is intended to be in an open position, i.e. it is a sectional view showing the sliding door as it is inside the wall module,

Figure 2 is an enlarged sectional view of the sliding door system of Figure 1a, taken along C-C,

Figure 3 shows a detail enlargement of I from Figure 2,

Figure 4a shows a detail enlargement of II from Figure 1b,

Figure 4b shows a detail enlargement of III from Figure 1c,

Figure 5a shows a detail enlargement of IV from Figure 1b,

Figure 5b shows a detail enlargement of V from Figure 1c,

Figure 6 shows an example of an actuating mechanism, and

Figure 7 shows an example of a stop frame, in cross section.

Detailed description

[0035] Figures 1a, 1b and 1c show an example of a sliding door system 1. The sliding door system comprises a wall module 3 and a sliding door 5, as well as a stop frame 7. The wall module 3 is advantageously a prefabricated wall module which is pre-assembled in a factory and which forms a separate unit before it is installed in a wall at the final installation site. Alternatively, the wall module can be assembled on location.

[0036] The wall module 3 comprises a frame 30 on which is mounted a first wall side 31 and a second wall side 32. Between these wall sides is an interior space 33 for receiving a sliding door 5. The wall module further comprises a vertical opening 34 leading into the space 33 for receiving of the sliding door 5. This opening 34 is arranged in a first vertical long side 35 of the wall module. The wall module also has a second, opposite, vertical long side 36. This second vertical long side, upon final installation of the module, will face a wall in the room where the wall module and the sliding door system are installed. The wall module further has a lower end side 37 and an upper end side 38. The wall module also has sealing strips 40 arranged at the opening of the wall module, see in particular the enlargement in Fig. 3. These sealing strips 40 are configured to cooperate with the sliding door 5 to provide sealing between the opening 34 of the wall module and the sliding door 5, when the sliding door is in the closed position.

[0037] As shown in Fig. 1a, at least one of said first and second wall sides may be provided with at least one opening 39 to provide access to the interior space of the wall module 33. In the illustrated example, there are several such openings so that the final installation is facilitated. Openings can e.g. be located near the second vertical long side 36 to facilitate wall mounting, near the upper end side 38 to facilitate access when securing it to a ceiling or wall by the top, and near the lower end side 37 to facilitate attachment to an underlying floor.

[0038] For example, adjacent to the lower end side 37 of the wall module, a control device 42 is provided. This is configured for guiding a lower end side 57 of the sliding door 5, which is pushed through the opening 34 and into the interior space 33. The control device is advantageously secured to the inside of at least one of said first 31 and second wall side 32.

[0039] The control device 42 can be configured to include a control channel 43 that is configured so that the lower end side 57 of the sliding door can run freely in this control channel. The control channel extends from the opening 34 and inwardly into the space 33. The control device need not extend along the entire lower end side of the wall module. It can, for example, extend by a length corresponding to 40-60% of the length of the interior space along the lower end side.

[0040] The control device may comprise, for example, a U-profile as shown in Fig. 5b. In this example, the control device also has a guide rail in the center, which is

configured to cooperate with a corresponding guide groove 59 arranged in the lower end side 57 of the sliding door.

[0041] The wall module 3 may, by way of example, comprise an overhead frame 46 which is secured to the upper end side 38 of the wall module and which extends over the wall module and has an extension part 46b having a length at least corresponding to the width of the sliding door for which the wall module is intended. In other words, the overhead frame 46, with its extension part 46b, after installation in place, should extend at least up to the stop frame 7.

[0042] In the example of the figures, a sliding door 5 is shown configured to be slid into a wall module 3 that includes an opening 34 for receiving the sliding door. The sliding door comprises a door leaf 50, a first vertical long side 51 configured to advance in front into the opening 34 of the wall module 3, upon the opening of the sliding door, and a second vertical long side 52 configured to cooperate with a stop frame 7 when closing the sliding door. The sliding door comprises an end member 53 that extends along the first vertical long side 51, see Fig. 3. This end member 53 has a first and a second protruding part, 53a and 53b respectively, that protrude past the door leaf, on either side of the door leaf 50. The first and second protruding parts of the end member can also be described as protruding in a horizontal direction past the door leaf. Preferably, the respective protruding part protrude substantially perpendicular to the door leaf so that they face and come into contact with the sealing strips 40 provided on the wall module adjacent to the opening

[0043] The first and second protruding parts, 53a and 53b respectively, are thus configured to cooperate with respective corresponding sealing strips 40 arranged on the wall module adjacent to the wall module opening 34, see Fig. 3.

[0044] The sliding door may be provided with an upper sealing device 60 comprising an upper sealing strip 61 arranged along an upper end side 58 of the door leaf. This upper sealing strip can be arranged so that it only has a sealing function when the door is in the closed position. For this purpose, there is then an upper actuating mechanism 63 that influences the upper sealing strip to take a sealing position when the sliding door is closed. How such a mechanism can be configured is explained below in connection with Fig. 4a and Fig. 4b and Fig. 6. [0045] The sliding door may be provided with a lower sealing device 63 comprising a lower sealing strip 64 arranged along a lower end side 57 of the door leaf. This lower sealing strip can be arranged so that it only has a sealing function when the door is in the closed position. For this purpose, there is then a lower actuating mechanism 65 that influences the lower sealing strip to assume a sealing position against the underlying floor, or equivalent, when the sliding door is closed. How such a mechanism can be configured is explained below in connection with Fig. 5a and Fig. 5b and Fig. 6.

[0046] As mentioned above, the sliding door system, of which an example is shown in Figs. 1a, 1b and 1c, also includes a stop frame 7 configured for receiving the sliding door 5 when the sliding door is in the closed position. An example of a stop frame is shown in Fig. 7, in cross section. This stop frame 7, according to the example, comprises a vertical frame channel 70 configured for interaction with the second vertical long side 52 of the sliding door when closing the sliding door, and said frame channel comprises at least one sealing strip 71 arranged for abutting the sliding door in the closed position. According to an example, the frame channel 70 has sidewalls 72 on which sealing strips 71 are arranged for abutting against the door leaf 50, on each side of the door leaf, when the sliding door is in the closed position. The example shows two sealing strips 71 that are arranged one on each sidewall of the frame channel. These sealing strips extend along the entire portion of the stop frame where the sliding door is expected to be in contact.

[0047] In a case when the wall module 3 does not include any overhead frame 46, the sliding door system may comprise a separate overhead frame that is mounted so that it extends over the wall module 3 and has an extension part 46a extending at least to the stop frame 7. [0048] Whether the overhead frame 46 is a part of the wall module 3 or a separate part, it may be provided with at least one downwardly projecting support strip 80 configured for abutment, when the door is closed, of an upper sealing strip 61 as previously described and which is arranged along the upper end side 58 of the door leaf 50. **[0049]** Fig. 4b shows the sliding door 5 in open position, i.e. when it is at least partially pushed into the wall module 3. In or on the upper end side 58 of the sliding door, an upper sealing device 60 with an upper sealing strip 61 is provided. In the open position, this strip does not touch anything. In Fig. 4a, the corresponding view is shown with the sliding door in the closed position. Here it is apparent how the sealing strip 61 has been pushed to one side so that it will abut against the supporting strip 80 and thus a seal is obtained between the sliding door and the supporting strip 80 mounted on the overhead frame 46. The supporting strip 80 extends along the entire length of the overhead frame 46, 46b over the sliding door and the upper sealing strip 61 extend along the entire length of the upper end side 58.

[0050] Fig. 5b also shows the sliding door in open position, i.e. when it is at least partially pushed into the wall module 3. In or on the lower end side 57 of the sliding door, a lower sealing device 63 with a lower sealing strip 64 is provided. In the open position, this strip does not touch anything. In Fig. 5a, the corresponding view is shown with the sliding door in the closed position. Here it is shown how the sealing strip 64 has been pushed downwards so that it will abut against the floor under the sliding door. Thus, a seal is obtained between the sliding door and the underlying floor. The sealing strip extends along the entire length of the lower end side 57.

[0051] Fig. 6 shows an example of how an actuating

mechanism, 62 and 65 respectively, may be configured. The mechanism comprises a protruding pin 91 that is spring loaded and a sealing strip 92. Between the sealing strip and the pin are link arms 93 that can pivot around a pivot pin 94. When the pin 91 is unaffected, the mechanism is in a rest position that may be designated as inactive, since the sealing strip 92 is inactive in that it does not have a sealing function. When the pin 91 is subjected to a force so that it is pushed inwards, in the direction of the arrow F, the link arms 93 will pivot around the respective pin 94 and then the sealing strip 92 will be moved in the direction of arrow A. If it is considered that Fig. 6 shows an actuating mechanism seen from above, it can be used to move the upper sealing strip 61 laterally so that it comes into contact with the support strip 80 as shown in Fig. 4a, when the pin 91 is pushed inwards by means of bumping against the stop frame. Instead, if it is considered that Fig. 6 shows an actuating mechanism seen from the side, it can be used to move the lower sealing strip 64 in a downward direction so as to abut the underlying floor, as shown in Fig. 5a, when pin the 91 is pushed inwards by means of bumping against the stop

[0052] Fig. 3 shows in more detail an example of how the sealing strips 40 can be arranged in connection with the opening 34 of the wall module. The example shows two sealing strips 40 arranged one on each inside of the respective wall sides 31 and 32. The sealing strips are arranged opposite to each other so that they face towards/inwards in the opening 34. The sealing strips thus extend vertically, preferably along the entire inside of the respective first and second wall sides of the wall module, at the vertical opening 34 in the wall module. They will thus come into contact with the respective protruding first and second parts 53a, 53b of the sliding door end member 53 when the sliding door end member is in the opening 34. The distance between the sealing strips should, of course, be balanced so that a functional and sealing contact is established between the sealing strips and the protruding parts of the end member. In the illustrated example, the two sealing strips 40 of the wall module are located on a particular end strip 48 that is arranged on the respective first and second wall side 31, 32. This end strip is illustrated to also cover the wall panels, e.g. plasterboard or chipboard, that are mounted on the wall of the wall module after installation of the wall module.

[0053] In the example in Fig. 5 is shown a variant in which the control device 42 is a U-formed profile that is fastened on the inside of both the first wall side 31 and the second wall side 32.

[0054] What has been described above shall not be considered as being limited to the above given examples, but may be modified in numerous ways within the scope of the appended patent claims.

55

30

35

40

Claims

- 1. A sliding door (5) configured to be retracted into a wall module comprising an opening for receiving the sliding door, the sliding door comprising a door leaf (50), a first vertical long side (51) configured to advance in front into the opening in the wall module and a second vertical long side (52) configured to cooperate with a stop frame when closing the sliding door, characterized in that it comprises an end member (53) extending along the first vertical long side, said end member having a first and a second protruding part (53a, 53b) protruding past the door leaf (50), on each side of the door leaf, and wherein the first and second protruding parts (53a, 53b) are configured to cooperate with respective sealing strips arranged on the wall module adjacent to the opening of the wall module.
- 2. The sliding door according to claim 1, **characterized** in that the first and the second protruding part (53a, 53b) of the end member protrude in a horizontal direction past the door leaf (50).
- 3. The sliding door according to one of the preceding claims, **characterized in that** it is provided with an upper sealing device (60) comprising an upper sealing strip (61) arranged along an upper end side (38) of the door leaf (50), this upper sealing strip being arranged so that that it only has a sealing function when the door is in the closed position, and an upper actuating mechanism (62) which actuates the upper sealing strip (61) to take a sealing position when the sliding door is closed.
- 4. The sliding door according to one of the preceding claims, characterized in that it is provided with a lower sealing device (63) comprising a lower sealing strip (64) arranged along a lower end side (37) of the door leaf (50), this lower sealing strip being arranged so that it only has a sealing function when the door is in the closed position, and a lower actuating mechanism (65) which actuates the lower sealing strip (61) to take a sealing position when the sliding door is closed.
- **5.** A wall module (3) for a sliding door, which wall module comprises
 - a frame (30) on which is mounted a first wall side (31) and a second wall side (32),
 - an interior space (33) for receiving a sliding door and which interior space is arranged between the first wall side and the second wall side,
 - an opening (34) leading into the interior space for receiving the sliding door and said opening being arranged in a first vertical long side (35) of the wall module,

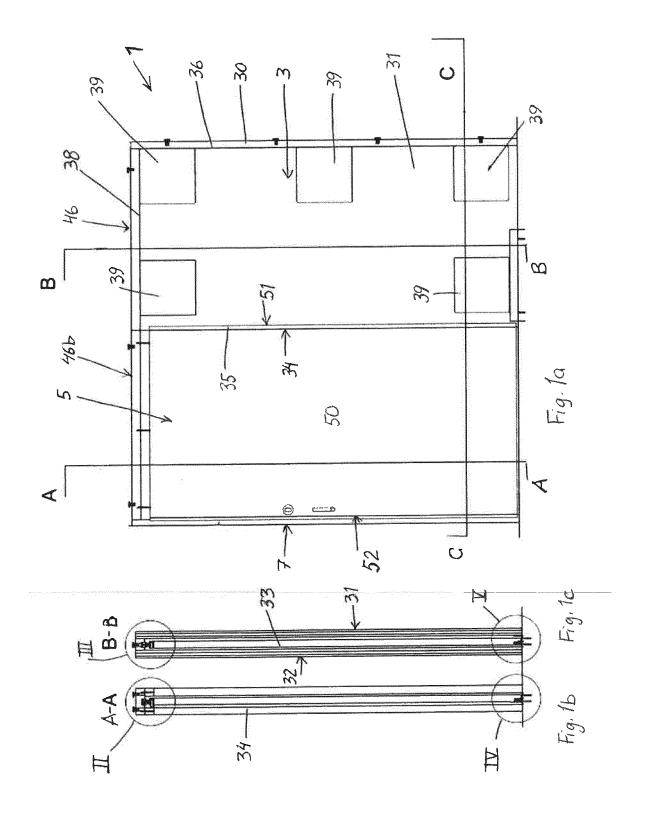
- a lower end side (37),
- an upper end side (38), and
- sealing strips (40) arranged adjacent to the opening (34) of the wall module, which sealing strips are configured to cooperate with the sliding door to provide a seal between the opening of the wall module and the sliding door when the sliding door is in the closed position.
- 6. The wall module according to claim 6, characterized in that at least one of said first and second wall sides (31, 32) is provided with at least one opening (39) for accessing the interior space (33) of the wall module.
 - 7. The wall module according to any one of claims 5-6, characterized in that a control device (42) is arranged at the lower end side (37) of the wall module, and that said control device is configured for controlling a lower end side of a sliding door which is inserted through said opening and into the interior space (33) and that the control device is fastened to the inside of at least one of said first and second wall sides (31, 32).
 - 8. The wall module according to claim 7, characterized in that the control device (42) comprises a control channel (43) which is configured so that the lower end side of the sliding door can run freely in this control channel.
 - The wall module according to claim 8, characterized in that the control channel (43) extends from the opening (34) and inwardly into the interior space (33).
 - 10. The wall module according to any one of claims 5-9, characterized in that it comprises an overhead frame (46) which is secured to the upper end side (38) of the wall module and which extends over the wall module and has an extension part (46b) having a length which at least corresponds to the width of the sliding door for which the wall module is intended.
- 45 11. A sliding door system (1), characterized in that it comprises a sliding door (5) according to any one of claims 1-4 and a wall module (3) according to any one of claims 5-10.
- 12. The sliding door system (1) according to claim 11, characterized in that it comprises a stop frame (7) configured for receiving the sliding door when the sliding door is in the closed position.
- 13. The sliding door system according to claim 12, characterized in that the stop frame (7) comprises a vertical frame channel (70) configured to cooperate with the second vertical long side (52) of the sliding

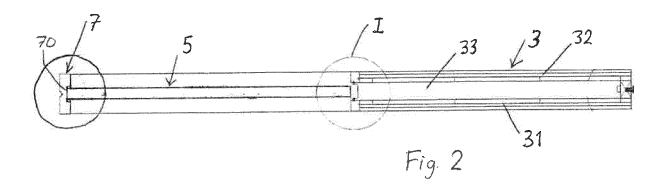
door (5) when closing the sliding door, and that said frame channel comprises at least one sealing strip (71) arranged for abutting against the sliding door.

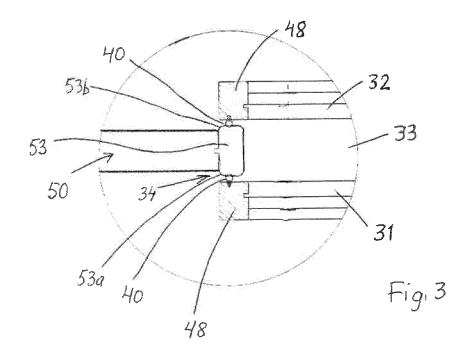
14. The sliding door system according to claim 13, **characterized in that** the frame channel (70) of the stop frame (7) has side walls (72) on which sealing strips (40) are arranged for abutting against the sliding door leaf (50), on each side of the door leaf, when the sliding door is in the closed position.

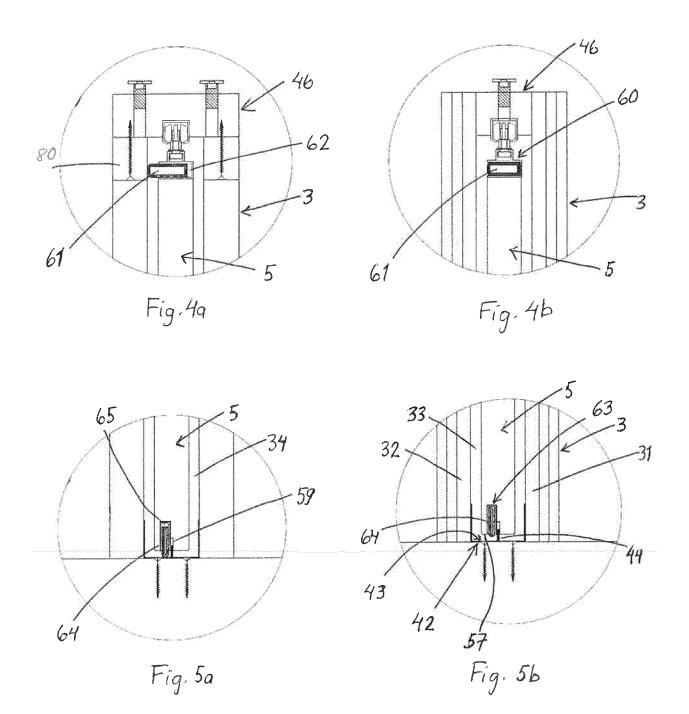
15. The sliding door system according to any one of claims 12-14, **characterized in that**, in the case when the wall module (3) does not comprise an overhead frame (46), then the sliding door system comprises a separate overhead frame extending over the wall module and having an extension part extending at least to the stop frame.

16. The sliding door system according to any one of claims 12-15, **characterized in that** the overlying frame (46) is provided with at least one downwardly projecting support strip (80) configured for abutment, when the door is closed, of an upper sealing strip (61) arranged along an upper end face (58) of the door leaf (50).









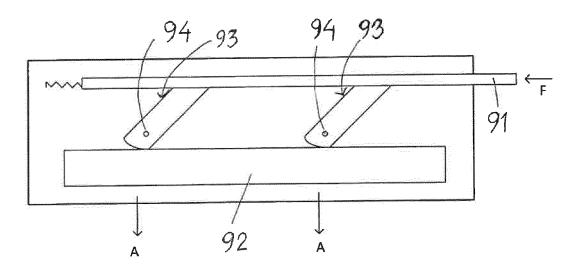
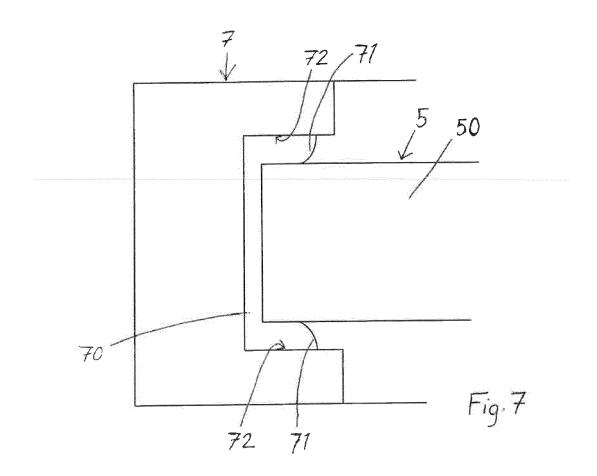


Fig. 6





EUROPEAN SEARCH REPORT

DOCUMENTS CONSIDERED TO BE RELEVANT

Application Number

EP 19 18 3351

1	0	
1	0	

940	Munich	
č I		

Category	Citation of document with in of relevant passa		opriate,	Relev to clai		CLASSIFICATION OF THE APPLICATION (IPC)
Υ	WO 2014/026268 A1 (FIELD STEPHEN [CA] 20 February 2014 (2 * page 4, line 20 * * page 11, line 5 - figures 7a-7d *	ET AL.) 014-02-20)		1-3,5 7-14, 4,6,1	,16 E	NV. 05D15/06 06B3/46 06B7/16
Υ	WO 2017/190779 A1 (9 November 2017 (20 * abstract; figure	17-11-09)	G [CH])	4		
Υ	WO 99/64709 A1 (ZEM 16 December 1999 (1 * page 3, line 13 - 4; figures 2-7 *	999-12-16)		6		
Υ	EP 1 767 738 A2 (NO 28 March 2007 (2007 * paragraph [0061];	-03-28)	[NO])	15		
						TECHNICAL FIELDS SEARCHED (IPC)
					Ē	06B 05G 05D
	The present search report has b	•				
	Place of search Munich		oletion of the search ember 201			d, Peter
X : parti Y : parti docu A : tech	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with anothument of the same category inological background -written disclosure rmediate document		T : theory or prir E : earlier paten after the filing D : document cit L : document cit	nciple underlyin t document, bu date ded in the appliced for other rea	g the inven t published cation asons	tion on, or

EP 3 591 155 A1

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 19 18 3351

5

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 The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

05-11-2019

10	Patent document cited in search report		Publication date		Patent family member(s)	Publication date
15	WO 2014026268	A1	20-02-2014	CA EP WO	2881677 A1 2882920 A1 2014026268 A1	20-02-2014 17-06-2015 20-02-2014
20	WO 2017190779	A1	09-11-2017	AU CN EP JP KR SG US WO	2016405471 A1 109154178 A 3452680 A1 2019516885 A 20190002648 A 11201809062Y A 2019128054 A1 2017190779 A1	15-11-2018 04-01-2019 13-03-2019 20-06-2019 08-01-2019 29-11-2018 02-05-2019 09-11-2017
25	WO 9964709	A1	16-12-1999	AU WO	4129799 A 9964709 A1	30-12-1999 16-12-1999
	EP 1767738	A2	28-03-2007	EP FR	1767738 A2 2891299 A1	28-03-2007 30-03-2007
30						
35						
40						
45						
50						
55	D D D D D D D D D D D D D D D D D D D					

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

EP 3 591 155 A1

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

• WO 2015181530 A [0004]