Claims

1. Sliding door system (100) for installation in a building wall (102), wherein the sliding door system (100) comprises:

a first wall part (104) having a first door opening (106);

a second wall part (108) having a second door opening (110), wherein the first wall part (104) and the second wall part (108) are arranged opposite one another such that the first door opening (106) is opposite the second door opening (110) and the first wall part (104) is separated from the second wall part (108) by an intermediate space (112);

a first door leaf (114) for closing the first door opening (106);

a second door leaf (116) for closing the second door opening (110);

a door leaf carrier (118) which is slidable along the intermediate space (112) by means of a linear guide device (120) and on which the first door leaf (114) and the second door leaf (116) are pivotably mounted by means of a pivot mechanism (124) wherein the pivot mechanism (124) comprises several torsion bars (128, 130, 132, 134), rotatably mounted about their longitudinal axis in the door leaf carrier (118), and several pivot levers (136, 138, 140, 142), wherein each pivot lever (136, 138, 140, 142) is fixedly connected at its first end to one of the torsion bars (128, 130, 132, 134) and at its second end connected in an articulated manner to one of the door leaves (114, 116); and

a coupling device (126) for converting a sliding movement of the door leaf carrier (118) into a rotational movement for actuating the pivot mechanism (124) such that the first door leaf (114) and the second door leaf (116) are pivoted relative to the door leaf carrier (118), wherein the coupling device (126) comprises a slotted component (144) having a slot (146) representing a desired relationship between the sliding movement and the rotational movement and a control lever (148) for coupling the slot (146) to the pivot mechanism (124), wherein the slotted component (144) is mounted on the first wall part (104) and/or on the second wall part (108) wherein the control lever (148) is fixedly connected at its first end to a first (128) of the torsion bars (128, 130, 132, 134) and is mounted at its second end in an articulated manner in the slot (146);

wherein the first door leaf (114) is connected to the first torsion bar (128) via at least a first (136) of the pivoting levers (136, 138, 140, 142), and via at least a

second (138) of the pivoting levers (136, 138, 140, 142) to a second (130) of the torsion bars (128, 130, 132, 134); and/or

wherein the second door leaf (116) is connected via at least a third (140) of the pivot levers (136, 138, 140, 142) to a third (132) of the torsion bars (128, 130, 132, 134) and via at least a fourth (142) of the pivot levers (136, 138, 140, 142) to a fourth (134) of the torsion bars (128, 130, 132, 134).

2. Sliding door system (100) according to claim 1,

wherein the slot (146) comprises a straight first slot section (202), a straight second slot section (204), and a curved third slot section (206) for guiding the control lever (148);

wherein the third slot section (206) is arranged between the first slot section (202) and the second slot section (204) and/or transitions into the first slot section (202) and the second slot section (204).

3. Sliding door system (100) according to claim 2,

wherein the first slot section (202) and the second slot section (204) are oriented obliquely to each other.

4. Sliding door system (100) according to claim 2 or 3,

wherein the slotted component (144) is mounted on the first wall part (104) and/or on the second wall part (108) in such a way that the first slot section (202) extends parallel to a sliding direction (122) of the door leaf carrier (118).

5. Sliding door system (100) according to one of the preceding claims,

wherein a geometry of the slot (146) is selected such that the first door leaf (114) and the second door leaf (116) each

- follow a straight first track section (150a) when the door leaf carrier (118) is slid between an initial position (152), in which the first door opening (106) and the second door opening (110) are not locked, and a first intermediate position (154),

- follow a curved second track section (150b) when the door leaf carrier (118) is slid between the first intermediate position (154) and a second intermediate position (156) in which the first door leaf (114) of the first door opening (106) and the second door leaf (116) of the second door opening (110) are opposite,

- follow a straight third track section (150c), which is orthogonal to the first track section (150a), when the door leaf carrier (118) is slid between the second intermediate position (156) and an end position (158) in which the first door leaf (114) closes the first door opening (106), and the second door leaf (116) closes the second door opening (110).

6. Sliding door system (100) according to claim 5,

wherein the second track section (150b) is at least partially clothoid-shaped.

7. Sliding door system (100) according to claim 1,

wherein the first torsion bar (128) and the second torsion bar (130) together with the first pivot lever (136) and the second pivot lever (138) form a first parallelogram guide for pivoting the first door leaf (114); and/or

wherein the third torsion bar (132) and the fourth torsion bar (134) together with the third pivot lever (140) and the fourth pivot lever (142) form a second parallelogram guide for pivoting the second door leaf (116).

8. Sliding door system (100) according to claim 1 or 7,

wherein the first torsion bar (128) is coupled to the third torsion bar (132) in such a way that a rotational movement of the first torsion bar (128) results in a counter-rotating rotational movement of the third torsion bar (132); and/or

wherein the second torsion bar (130) is coupled to the fourth torsion bar (134) in such a way that a rotational movement of the second torsion bar (130) results in a counter-rotating rotational movement of the fourth torsion bar (134).

9. Sliding door system (100) according to one of claims 1 through 8,

wherein the first torsion bar (128) is coupled to the second torsion bar (130) in such a way that a rotational movement of the first torsion bar (128) results in a co-rotating rotational movement of the second torsion bar (130); and/or

wherein the third torsion bar (132) is coupled to the fourth torsion bar (134) in such a way that a rotational movement of the third torsion bar (132) results in a co-rotating rotational movement of the fourth torsion bar (134).

10. Sliding door system (100) according to one of claims 1 through 9,

wherein the pivot mechanism (124) comprises at least one spur gear pair for converting the rotational movement into the counter-rotating and/or co-rotating rotational movement.