CLAIMS

1. A self-reliance transfer device comprising:

a support structure placed on a floor surface;

a support arm mounted on the support structure so as to be pivotable between a receiving angular position for receiving an upper body of a transferee and an uplifted angular position for uplifting the upper body; and

an upper-body support attached to an end of the support arm, wherein:

an upper part of the support arm is tilting toward a receiving side at 30 to 40 degrees with respect to a lower part thereof;

in order to transfer, the support arm is positioned at the receiving angular position, and the upper body of the transferee is received onto the upper-body support of the support arm at the receiving angular position, and then the support arm is pivoted, through an operation by the transferee, from the receiving angular position to the uplifted angular position to lift up the transferee;

an expansion mechanism for driving the support arm and an elastic bias means for elastically biasing the support arm toward the uplifted angular position are disposed between the support structure and the support arm;

when the expansion mechanism is in an extending state, the support arm is maintained at the receiving angular position, and when the expansion mechanism is brought to a retract condition, then the support arm is brought into the uplifted angular position;

the upper-body support includes a main support part for supporting the upper body of the transferee, the main support part being maintained in an upper front direction tilting at 15 to 25 degrees with respect to the horizontal direction when the support arm is at the uplifted angular position.

2. The self-reliance transfer device according to claim 1, wherein:

the support structure includes a support main body to be placed on a floor surface and a support turntable rotatable relative to the support main body;

the support arm is pivotably mounted on the support turntable;

both feet of the transferee are placed on the support turntable;

the pivotal movement of the support arm from the receiving angular position to the uplifted angular position lifts up the transferee while maintaining the posture of the transferee whose upper body was received on the upper-body support of the support arm at the receiving angular position

3. The self-reliance transfer device according to claim 2, wherein the support turntable is movable between a first rotation angular position 90 degrees away in a predetermined direction from a home angular position having a predetermined positional relationship with the support main body and a second rotation angular position 90 degrees away from the home angular position in a direction opposite to the predetermined direction.

4. The self-reliance transfer device according to any of claims 1 to 3, wherein knee supports are disposed on both sides of the support arm for supporting knees of the transferee, the knee supports being positionally adjustable in a front-rear direction; and when transfer, the upper body of the transferee is received on the upper-body support of the support arm while both knees of the transferee are in abutment with the knee supports, and the support arm is pivoted from the receiving angular position to the uplifted angular position while the knees of the transferee are in abutment with the knee supports.

5. The self-reliance transfer device according to any of claims 1 to 4, wherein the main support is maintained to extend in an upper front direction tilting at 50 to 60 degrees with respect to the horizontal direction when the support arm is at the receiving angular position, and the support arm is pivoted in a range of a tilt angular difference between a tilt angle of the main support at the receiving angular position and an another tilt angle of the main support at the uplifted angular position.

6. The self-reliance transfer device according to claim 5, wherein a front support part is provided at a front end of the main support of the upper-body support so as to extend in a substantially letter-L shape, the front support part having a front section to support parts of the both arms below the elbows of the transferee.

7. The self-reliance transfer device according to claim 1, wherein: the support structure is attached with a housing for covering a front section of the support structure, the housing having an upper surface formed with an opening corresponding to an pivoting range of the support arm; the support arm is attached with a long thin safety cover for covering the

opening, the safety cover moving along the opening at inside of the housing together with pivotal movement of the support arm; the housing includes a left housing and a right housing interlocked with other by bosses; and the safety cover extends through a gap between an upper wall of the housing and the bosses.

8. A self-reliance transfer device comprising:

a support structure placed on a floor surface;

a support arm mounted on the support structure so as to be pivotable between a receiving angular position for receiving an upper body of a transferee and an uplifted angular position for uplifting the upper body; and

an upper-body support attached to an end of the support arm, wherein:

an upper part of the support arm is tilting toward a receiving side with respect to a lower part thereof;

in order to transfer, the support arm is positioned at the receiving angular position, and the upper body of the transferee is received onto the upper-body support of the support arm at the receiving angular position, and then the support arm is pivoted from the receiving angular position to the uplifted angular position to lift up the transferee;

an expansion mechanism for driving the support arm and an elastic bias means for elastically biasing the support arm toward the uplifted angular position are disposed between the support structure and the support arm;

when the expansion mechanism is in an extending state, the support arm is maintained at the receiving angular position, and when the expansion mechanism is brought to a retract condition, then the support arm is brought into the uplifted angular position;

a moving caster is provided at the front section of the support structure for moving the support structure, the moving caster being movable between a protruding position where the moving caster protrudes downward beyond the support structure to act on a floor surface and an accommodated position retracted upward from the floor surface;

the support arm is provided with an operation lever;

a push member is pivotably provided in relation to the operation lever;

a moving rod is movably provided to the support structure for positioning the moving caster to the protruding position, the moving caster being attached to a pivot attachment member that is pivoted by the moving rod, wherein when the operation lever is pulled, then the push member is brought to an acting position, and when the support arm is pivoted from the receiving angular position to the uplifted angular position in this condition, then the push member acts on the pivot attachment member through the moving rod, pivoting the pivot attachment member downward to bring the moving caster from the accommodated position to the protruding position.

CLAIMS

1. A transfer device comprising:

a support structure placed on a floor surface;

a support arm mounted on the support structure so as to be pivotable between a receiving angular position for receiving an upper body of a transferee and an uplifted angular position to uplift the upper body; and

an upper-body support attached to an end of the support arm, wherein:

an upper part of the support arm is tilting toward a receiving side with respect to a lower part thereof;

in order to transfer, the support arm is positioned at the receiving angular position, and the upper body of the transferee is received onto the upper-body support of the support arm at the receiving angular position, and then the support arm is pivoted from the receiving angular position to the uplifted angular position to lift up the transferee.

2. The transfer device according to claim 1, wherein: the support structure includes a support main body to be placed on a floor surface and a support turntable rotatable relative to the support main body; the support arm is pivotably mounted on the support turntable; and both feet of the transferee are placed on the support turntable.

3. The transfer device according to claim 2, wherein the support turntable is movable between a first rotation angular position 90 degrees away in a predetermined direction from a home angular position having a predetermined positional relationship with the support turntable and a second rotation angular position 90 degrees away from the home angular position in a direction opposite to the predetermined direction.

4. The transfer device according to claim 2 or 3, wherein: an expansion mechanism is disposed between the support turntable and the support arm for driving the support arm; when the expansion mechanism is in an extending state, the support arm is maintained at the receiving angular position; and when the expansion mechanism is brought to a retract condition, then the support arm is brought into the uplifted angular position.

5. The transfer device according to any of claims 2 to 4, wherein an elastic bias means for elastically biasing the support arm toward the

uplifted angular position is located between the support turntable and the support arm.

6. The transfer device according to any of claims 1 to 5, wherein knee supports are disposed on both sides of the support arm for supporting knees of the transferee; and when transfer, the upper body of the transferee is received on the upper-body support of the support arm while both knees of the transferee are in abutment with the knee supports.

7. The transfer device according to any of claims 1 to 6, wherein the upper-body support includes a main support for supporting the upper body of the transferee, the main support being maintained to extend in an upper front direction tilting at 50 to 60 degrees with respect to the horizontal direction when the support arm is at the receiving angular position and to extend in an upper front direction tilting at 15 to 25 degrees with respect to the horizontal direction when the support arm is at the uplifted angular position, and the support arm is pivoted in a range of a tilt angular difference between a tilt angle of the main support at the receiving angular position and an another tilt angle of the main support at the uplifted angular position.

8. The transfer device according to claim 7, wherein support protrusions are disposed at both sides of the main support of the upper-body support for supporting both arms of the transferee, the support protrusions protruding upward.

9. The transfer device according to any of claims 1 to 7, wherein: the support turntable is attached with a housing for covering a front section of the support structure, the housing having an upper surface formed with an opening corresponding to an pivoting range of the support arm; and the support arm is attached with a long thin safety cover for covering the opening, the safety cover moving along the opening on inside of the housing together with pivotal movement of the support arm.

10. The transfer device according to claim 2, wherein a moving caster is provided at the front section of the support turntable for moving the support structure, the moving caster being movable between a protruding position where the moving caster protrudes downward beyond the support main body to act on a floor surface and an accommodated position retracted upward from the floor surface.

11. The transfer device according to claim 10, wherein:

the support arm is provided with an operation lever;

a push member is pivotably provided in relation to the operation lever;

a moving rod is movably provided to the support turntable for positioning the moving caster to the protruding position, the moving caster being attached to a pivot attachment member that is pivoted by the moving rod, wherein when the operation lever is pulled, then the push member is brought to an acting position, and when the support arm is pivoted from the receiving angular position to the uplifted angular position in this condition, then the push member acts on the pivot attachment member through the moving rod, pivoting the pivot attachment member downward to bring the moving caster from the accommodated position to the protruding position.

12. The transfer device according to claim 4, wherein an operation unit for controlling the expansion mechanism is provided to the upper-body support.