Claims

1. A system for coupling a suspension medium to a load carrying structure of an elevator installation, comprising:

a frame having two spaced apart side walls, wherein the side walls are positionable to receive a part of the load carrying structure between the side walls, and wherein each side wall has a receptacle having a predetermined shape; and

a hitch plate having a least one fixture configured to couple to a pulley arrangement for the suspension medium,

wherein each receptacle is sized to movably receive a section of the hitch plate so that the hitch plate extends between the side walls and is rotatable about a vertical axis.

2. The system of Claim 1, wherein the hitch plate has a circular shape.

3. The system of Claim 2, wherein sections of the circularly shaped hitch plate extend through the receptacles.

4. The system of Claim 2, wherein the hitch plate is configured to be rotatable between about 0° and about 360°.

5. The system of Claim 1, wherein at least one fixture includes an opening sized to receive a rod of the pulley arrangement.

6. The system of Claim 5, wherein a plurality of the openings is positioned along two straight perpendicular lines.

7. The system of Claim 1, further comprising a predetermined number of longitudinal elements extending between the side walls and interconnecting the side walls.

8. The system of Claim 7, wherein each side wall has a corresponding number of passageways, each removably receiving an end section of the longitudinal element.

9. The system of Claim 1, wherein each side wall has an upper part containing the receptacle, and a bottom part having an opening for a crossbeam.

10. The system of Claim 1, further comprising first setscrews extending through the hitch plate and configured to press against an upper surface of the support structure for vertical positioning of the system with respect to the load carrying structure, and second setscrews extending through the side walls to press against sides of the support structure for horizontal positioning of the system.

11. The system of Claim 10, wherein each setscrew has a bearing surface pressing against the load carrying structure that includes a material selected to dampen vibrations.

12. An elevator installation, comprising:

a suspension medium;

a sheave arrangement, coupled to the suspension medium;

a load carrying structure; and

a coupling system configured to couple the sheave arrangement to the load carrying structure, wherein the coupling system comprises:

a frame having two spaced apart side walls, wherein the side walls are positionable to receive a part of the load carrying structure between the side walls, and wherein each side wall has a receptacle having a predetermined shape; and

a hitch plate having a least one fixture configured to couple to the sheave arrangement,

wherein each receptacle is sized to movably receive a section of the hitch plate so that the hitch plate extends between the side walls and is rotatable about a vertical axis.

13. The installation of Claim 12, wherein the hitch plate has a circular shape.

14. The installation of Claim 13, wherein sections of the circularly shaped hitch plate extend through the receptacles.

15. The installation of Claim 13, wherein the hitch plate is configured to be rotatable between about 0° and about 360°.

16. A method of coupling a suspension medium to a load carrying structure of an elevator installation, comprising:

positioning a hitch plate above a part of a load carrying structure;

mounting side walls to the hitch plate so that sections of the hitch plate are rotatably positioned in receptacles of the side walls and the part of the load carrying structure extends between the side walls, wherein the side walls are opposite each other and extend in parallel planes; and

mounting a sheave arrangement to the hitch plate, wherein the sheave arrangement is configured to receive the suspension medium.

17. The method of Claim 13, wherein mounting the side walls includes connecting the side walls by means of rods and inserting a crossbeam into an opening at the bottom and on each side wall, wherein the crossbeam extends underneath the part of the load carrying structure.

18. The method of Claim 13, further comprising mounting setscrews to the hitch plate to fix a vertical position of the hitch plate with respect to the part of the load carrying structure, and mounting setscrews to the side walls to fix a horizontal position of the part of the load carrying structure with respect to the sidewalls.

Claims

1. A system for coupling a suspension medium to a load carrying structure of an elevator installation, comprising:

a frame having two spaced apart side walls extending in parallel planes, the side walls being interconnected by at least one rod extending through both of the side walls, wherein the side walls are positionable along the at least one rod to receive a part of the load carrying structure between the side walls, and wherein each of the side walls has a receptacle having a predetermined shape; and

a hitch plate having a least one fixture configured to couple to a pulley arrangement for the suspension medium,

wherein each receptacle is sized to rotatably receive a section of the hitch plate so that the hitch plate extends between the side walls and is rotatable about a vertical axis.

2. The system of Claim 1, wherein the hitch plate has a circular shape.

3. The system of Claim 2, wherein sections of the circularly shaped hitch plate extend through the receptacles.

4. The system of Claim 2, wherein the hitch plate is configured to be rotatable between about 0° and about 360°.

5. The system of Claim 1, wherein the at least one fixture includes an opening sized to receive a rod of the pulley arrangement.

6. The system of Claim 5, wherein a plurality of the openings is positioned along two straight perpendicular lines.

7. The system of Claim 1, further comprising a predetermined number of rods, including the at least one rod, extending between the side walls and interconnecting the side walls.

8. The system of Claim 7, wherein each side wall has a corresponding number of passageways, each removably receiving an end section of an associated one of the rods.

9. The system of Claim 1, wherein each side wall has an upper part containing the receptacle, and a bottom part having an opening for a crossbeam.

10. The system of Claim 1, further comprising first setscrews extending through the hitch plate and configured to press against an upper surface of the support structure for vertical positioning of the system with respect to the load carrying structure, and second setscrews extending through the side walls to press against sides of the support structure for horizontal positioning of the system.

11. The system of Claim 10, wherein each setscrew has a bearing surface pressing against the load carrying structure that includes a material selected to dampen vibrations.

12. An elevator installation, comprising:

a suspension medium;

a sheave arrangement, coupled to the suspension medium;

a load carrying structure; and

a coupling system configured to couple the sheave arrangement to the load carrying structure, wherein the coupling system comprises:

a frame having two spaced apart side walls extending in parallel planes, the side walls being interconnected by at least one rod extending through both of the side walls, wherein the side walls are positionable along the at least one rod to receive a part of the load carrying structure between the side walls, and wherein each of the side walls has a receptacle having a predetermined shape; and

a hitch plate having a least one fixture configured to couple to the sheave arrangement,

wherein each receptacle is sized to rotatably receive a section of the hitch plate so that the hitch plate extends between the side walls and is rotatable about a vertical axis.

13. The installation of Claim 12, wherein the hitch plate has a circular shape.

14. The installation of Claim 13, wherein sections of the circularly shaped hitch plate extend through the receptacles.

15. The installation of Claim 13, wherein the hitch plate is configured to be rotatable between about 0° and about 360°.

16. A method of coupling a suspension medium to a load carrying structure of an elevator installation, comprising:

positioning a hitch plate above a part of a load carrying structure;

mounting two side walls to the hitch plate so that sections of the hitch plate are rotatably positioned in receptacles of the side walls and the part of the load carrying structure extends between the side walls, wherein the side walls are opposite each other and extend in parallel planes, the side walls being interconnected by at least one rod extending through both of the side walls to form a frame and the side walls being positionable along the at least one rod; and

mounting a sheave arrangement to the hitch plate, wherein the sheave arrangement is configured to receive the suspension medium.

17. The method of Claim 16, wherein mounting the side walls includes connecting the side walls by means of rods, including the at least one rod, and inserting a crossbeam into an opening at the bottom and on each side wall, wherein the crossbeam extends underneath the part of the load carrying structure.

18. The method of Claim 16, further comprising mounting setscrews to the hitch plate to fix a vertical position of the hitch plate with respect to the part of the load carrying structure, and mounting setscrews to the side walls to fix a horizontal position of the part of the load carrying structure with respect to the sidewalls.

19. The system of Claim 1, wherein an axis of the hitch plate is substantially parallel with the side walls.

20. The installation of Claim 12, wherein an axis of the hitch plate is substantially parallel with the side walls.