CLAIMS

1. A transfer robot, comprising:

a support;

a fork, mounted on the support and capable of vertically moving up and down along the support;

a flexible lifting member, wound around the support; and

a lifting power assembly, connected with the flexible lifting member;

wherein a first end of the flexible lifting member is bypassed from top part of the support and connected with a top end of the fork, and a second end of the flexible lifting member is bypassed from a bottom part of the support and connected with a bottom end of the fork;

wherein the support comprises a fixed frame and a movable frame; and

the movable frame is mounted on the fixed frame and is able to move vertically along the fixed frame, and the fork is mounted on the movable frame.

2. The transfer robot according to claim 1, wherein the support comprises a first side part and a second side part, wherein the first side part and a second side part are arranged in parallel in a vertical direction and spaced apart;

a first side of the fork is on the first side part of the support, and a second side of the fork is located on the second side part of the support; and

the flexible lifting member comprises a first flexible lifting sub-member and a second flexible lifting sub-member, and the first flexible lifting sub-member is mounted on the first side part of the support, and the second flexible lifting sub-member is mounted on the second side part of the support.

3. The transfer robot according to claim 2, wherein the lifting power assembly comprises a first lifting power sub-assembly and a second lifting power sub-assembly;

the first lifting power sub-assembly comprises a first driving motor and a first driving wheel, the first flexible lifting sub-member is wound around the first driving wheel, a first end of the first flexible lifting sub-member is connected with a top end of a first side of the fork, and a second end of the first flexible lifting sub-member is connected with a bottom end of a first side of the fork.

4. The transfer robot according to claim 3, wherein the second lifting power sub-assembly comprises a second driving motor and a second driving wheel, the second flexible lifting sub-member is wound around the second driving wheel, a first end of the second flexible lifting sub-member is connected with a top end of a second side of the fork, and a second end of the second flexible lifting sub-member is connected with a bottom end of a second side of the fork.

5. The transfer robot according to claim 3, further comprising a first auxiliary transmission member; wherein the first auxiliary transmission member is mounted on the first side part of the support;

wherein the first auxiliary transmission member comprises a first driven wheel, a second driven wheel, a third driven wheel, and a fourth driven wheel;

the first driven wheel is mounted at a top part of the fixed frame, the second driven wheel is mounted at a bottom part of the movable frame, the third driven wheel is mounted at a top part of the movable frame, and the fourth driven wheel is mounted at a bottom part of the fixed frame; and

the first flexible lifting sub-member is wound sequentially around the first driving wheel, the first driven wheel, the second driven wheel, the third driven wheel, and the fourth driven wheel.

6. The transfer robot according to claim 5, wherein the first auxiliary transmission member further comprises a fifth driven wheel, the fifth driven wheel is mounted between the first driving wheel and the first driven wheel, and the first flexible lifting sub-member is wound around the fifth driven wheel.

7. The transfer robot according to claim 4, further comprising a second auxiliary transmission member; wherein the second auxiliary transmission member is mounted on the second side part of the support;

wherein the second auxiliary transmission member comprises a sixth driven wheel, a seventh driven wheel, an eighth driven wheel, and a ninth driven wheel;

the sixth driven wheel is mounted at a top part of the fixed frame, the seventh driven wheel is mounted at a bottom part of the movable frame, the eighth driven wheel is mounted

at a top part of the movable frame, and the ninth driven wheel is mounted at a bottom part of the fixed frame; and

the second flexible lifting sub-member is wound sequentially around the second driving wheel, the sixth driven wheel, the seventh driven wheel, the eighth driven wheel, and the ninth driven wheel.

8. The transfer robot according to claim 7, wherein the second auxiliary transmission member further comprises a tenth driven wheel, the tenth driven wheel is mounted between the second driving wheel and the sixth driven wheel, and the second flexible lifting sub-member is wound around the tenth driven wheel.

9. The transfer robot according to claim 2, wherein a guider is provided between the fixed frame and the movable frame, and the guider comprises a roller wheel assembly;

the roller wheel assembly comprises a first roller wheel sub-assembly and a second roller wheel sub-assembly; and

the first roller wheel sub-assembly is mounted at a top part of the fixed frame, and the second roller wheel sub-assembly is mounted at a bottom part of the movable frame, the second roller wheel sub-assembly is configured to move up or down together with the movable frame.

10. The transfer robot according to claim 1, wherein a shelf board is horizontally provided on one side of the fixed frame, the shelf board being set back-to-back with the fork.