The present invention has arisen to obviate/ mitigate the disadvantages of the conventional wave power converting device.

The present invention relates to a wave power converting device comprises a platform, the platform having a retaining post anchored to an underwater ground, a plurality of first fluid guide assemblies assembled to the platform, each of the first fluid guide assemblies having a first guide tube and a first side tube, the first guide tube disposed underwater with one end, the first side tube extended upwardly from one lateral side of the first guide tube, a plurality of second fluid guide assemblies assembled to the platform, each of the second fluid guide assemblies having a second guide tube and a second side tube, the second guide tube disposed underwater with one end, the second side tube extended downwardly from one lateral side of the second guide tube, a floating assembly, the floating assembly having a top plate, a bottom plate and a connecting rod, the floating assembly assembled to the platform and the floating assembly being movable up and down relative to the platform, the top plate having a plurality of first pistons extended downwardly therefrom, each of the ~~fist~~ pistons inserted into the respective first side tube, the bottom plate having a plurality of second pistons extended upwardly therefrom, each of the second pistons inserted into the respective second side tube, the top plate having a plurality of positioning grooves defined around an outer periphery thereof, the adjacent positioning grooves being separated by a distance, the first fluid guide assemblies and the second fluid guide assemblies being

flows into the first guide tube 31 and the second guide tube 41 from one ends thereof, the respective check valves 5 are provided to prevent a reverse flow of water.

Referring to Figs. 1, 2 and 5, the floating assembly 2 has a top plate 21, a bottom plate 22 and a connecting rod 23. The connecting rod 23 connects the top plate 21 and the bottom plate 22. A buoy body 24 is mounted around the top plate 21. The floating assembly 2 is assembled to the platform 1 and the floating assembly 2 is movable up and down relative to the platform 1. The top plate 21 has a plurality of first pistons 211 extended downwardly therefrom. Each of the ~~fist~~ pistons 211 is inserted into the respective first side tube 32. The bottom plate 22 has a plurality of second pistons 221 extended upwardly therefrom. Each of the second pistons 221 is inserted into the respective second side tube 42. The connecting rod 23 is movably mounted around the retaining post 11 of the platform 1 so that the floating assembly 2 could be moved relative to the retaining post 11. Therefore, when the buoy body 24 is driven by waves, the top plate 21, the bottom plate 22 and the connecting rod 23 are moved simultaneously so as to drive the first pistons 211 and the second pistons 221 reciprocated vertically. Wherein, each first piston 211 is inserted into the respective first side tube 32 so as to press the water into the first guide tube 31, and each second piston 221 is inserted into the respective second side tube 42 so as to press the water into the second guide tube 41.

Referring to Fig. 2, the top plate 21 has a plurality of positioning

221. Therefore, the water flows upwardly to a reservoir (not shown) above the platform 1. The potential energy of the water in the reservoir can be converted into electrical energy or other applications. The mechanism of the present invention is described above, wherein the water flows upwardly through the first fluid guide assemblies 3 and the second fluid guide assemblies 4 by the motion of the floating assembly. Fig. 6 shows the wave power converting device under a low water level condition and Fig. 7 shows the wave power converting device under a high water level condition. Therefore, the water ~~lever~~ difference provides a potential energy which can be converted into electrical energy.

CLAIM(S)

1. A wave power converting device, comprising:

a platform~~, the platform~~ having a retaining post anchored to an underwater ground;

a plurality of first fluid guide assemblies assembled to the platform, each of the first fluid guide assemblies having a first guide tube and a first side tube, the first guide tube disposed underwater with one end, the first side tube extended upwardly from one lateral side of the first guide tube;

a plurality of second fluid guide assemblies assembled to the platform, each of the second fluid guide assemblies having a second guide tube and a second side tube, the second guide tube disposed underwater with one end, the second side tube extended downwardly from one lateral side of the second guide tube; and

a floating assembly~~, the floating assembly~~ having a top plate, a bottom plate and a connecting rod, the floating assembly assembled to the platform and the floating assembly being movable up and down relative to the platform, the top plate having a plurality of first pistons extended downwardly therefrom, each of the ~~fist~~ pistons inserted into the respective first side tube, the bottom plate having a plurality of second pistons extended upwardly therefrom, each of the second pistons inserted into the respective second side tube~~, the top plate having a plurality of positioning grooves defined around an outer periphery thereof, the adjacent positioning grooves being separated by a distance, the first fluid guide assemblies and the second fluid guide assemblies being located in the corresponding positioning grooves~~;

The present invention has arisen to obviate/ mitigate the disadvantages of the conventional wave power converting device.

The present invention relates to a wave power converting device comprises a platform, the platform having a retaining post anchored to an underwater ground, a plurality of first fluid guide assemblies assembled to the platform, each of the first fluid guide assemblies having a first guide tube and a first side tube, the first guide tube disposed underwater with one end, the first side tube extended upwardly from one lateral side of the first guide tube, a plurality of second fluid guide assemblies assembled to the platform, each of the second fluid guide assemblies having a second guide tube and a second side tube, the second guide tube disposed underwater with one end, the second side tube extended downwardly from one lateral side of the second guide tube, a floating assembly, the floating assembly having a top plate, a bottom plate and a connecting rod, the floating assembly assembled to the platform and the floating assembly being movable up and down relative to the platform, the top plate having a plurality of first pistons extended downwardly therefrom, each of the first pistons inserted into the respective first side tube, the bottom plate having a plurality of second pistons extended upwardly therefrom, each of the second pistons inserted into the respective second side tube, the top plate having a plurality of positioning grooves defined around an outer periphery thereof, the adjacent positioning grooves being separated by a distance, the first fluid guide assemblies and the second fluid guide assemblies being

flows into the first guide tube 31 and the second guide tube 41 from one ends thereof, the respective check valves 5 are provided to prevent a reverse flow of water.

Referring to Figs. 1, 2 and 5, the floating assembly 2 has a top plate 21, a bottom plate 22 and a connecting rod 23. The connecting rod 23 connects the top plate 21 and the bottom plate 22. A buoy body 24 is mounted around the top plate 21. The floating assembly 2 is assembled to the platform 1 and the floating assembly 2 is movable up and down relative to the platform 1. The top plate 21 has a plurality of first pistons 211 extended downwardly therefrom. Each of the first pistons 211 is inserted into the respective first side tube 32. The bottom plate 22 has a plurality of second pistons 221 extended upwardly therefrom. Each of the second pistons 221 is inserted into the respective second side tube 42. The connecting rod 23 is movably mounted around the retaining post 11 of the platform 1 so that the floating assembly 2 could be moved relative to the retaining post 11. Therefore, when the buoy body 24 is driven by waves, the top plate 21, the bottom plate 22 and the connecting rod 23 are moved simultaneously so as to drive the first pistons 211 and the second pistons 221 reciprocated vertically. Wherein, each first piston 211 is inserted into the respective first side tube 32 so as to press the water into the first guide tube 31, and each second piston 221 is inserted into the respective second side tube 42 so as to press the water into the second guide tube 41.

Referring to Fig. 2, the top plate 21 has a plurality of positioning

221. Therefore, the water flows upwardly to a reservoir (not shown) above the platform 1. The potential energy of the water in the reservoir can be converted into electrical energy or other applications. The mechanism of the present invention is described above, wherein the water flows upwardly through the first fluid guide assemblies 3 and the second fluid guide assemblies 4 by the motion of the floating assembly. Fig. 6 shows the wave power converting device under a low water level condition and Fig. 7 shows the wave power converting device under a high water level condition. Therefore, the water level difference provides a potential energy which can be converted into electrical energy.

CLAIM(S)

1. A wave power converting device, comprising:

a platform having a retaining post anchored to an underwater ground;

a plurality of first fluid guide assemblies assembled to the platform, each of the first fluid guide assemblies having a first guide tube and a first side tube, the first guide tube disposed underwater with one end, the first side tube extended upwardly from one lateral side of the first guide tube;

a plurality of second fluid guide assemblies assembled to the platform, each of the second fluid guide assemblies having a second guide tube and a second side tube, the second guide tube disposed underwater with one end, the second side tube extended downwardly from one lateral side of the second guide tube; and

a floating assembly having a top plate, a bottom plate and a connecting rod, the floating assembly assembled to the platform and the floating assembly being movable up and down relative to the platform, the top plate having a plurality of first pistons extended downwardly therefrom, each of the first pistons inserted into the respective first side tube, the bottom plate having a plurality of second pistons extended upwardly therefrom, each of the second pistons inserted into the respective second side tube;

6. The wave power converting device as claimed in claim 1, wherein the top plate of the floating assembly has a plurality of positioning grooves defined around an outer periphery thereof, and the adjacent positioning grooves being separated by a distance, and wherein the first fluid guide assemblies and the second fluid guide assemblies are located in the corresponding positioning grooves.